Address
ON THE
ORIGINS OF SANITATION.

Delivered in the Section of Preventive Medicine at the Congress of the British Institute of Public Health at Hull on Aug. 9th, 1895,

BY J. SPOTTISWOODE CAMERON, M.D. EDIN., &c.,

MEDICAL OFFICER OF HEALTH TO THE CITY OF LEEDS; CONSULTING PHYSICIAN TO THE HUDDERSFIELD INFIRMARY, &c.

MR. PRESIDENT AND GENTLEMEN,—In looking back through the long vista of the past one is struck by the importance attached by the first great master in physic to the department of prophecy. To this day the description given by Hippocrates of the man about to die is as vivid and as truthful as when it was first written. But while the foretelling of the probable course of an illness was then, and still remains, amongst the most important powers of the practising physician, the means at his command for arresting in their earlier stages the processes which make for death have enormously increased. There came, indeed, a time, which some of us are even old enough to remember, when pathology ran the risk of being regarded as little else than morbid anatomy and the classification of disease a mere cataloguing of the phenomena immediately preceding death. Indeed, a certain hopelessness, begotten of this mistake, threatened to sap the energies of those engaged in the treatment of the sick. But the natural resilience of science enabled medicine, after a time, to look rather to the causing than to the resulting factors as the basis of classification. Nor was the threatening of fatalism, which too great an attention to induced conditions brought about, entirely without its uses. Though a damaged organ could not be replaced, the processes by which it had arrived at the incurable could be investigated, and their action in another person possibly forestalled; while the study of processes, carried still further back, led not only to a better knowledge of, and better means of dealing with, the causes of disease in the individual, but to a clearer conception of, and greater command over, those etiological factors which had favoured their selection or development.

When Sydenham had, two centuries ago, introduced a rational and hygienic element into treatment, he had also, as it were, pointed in the direction to which, when the hopelessness referred to came upon us, we might look for the prevention of disease itself. A belief therefore in the value of cleanliness, fresh air, and reasonable diet, along with a certain not altogether unhealthy scepticism as to the need in every case of drugs, was not the least important weapon in the armament of the young physician some thirty years ago, and although new drugs have ever found new votaries, and many and valuable means of treatment have been put into our hands, the absolute usefulness of all mere remedial measures is even at the present day looked upon as infinitely little compared with the shielding influence which the physician exercises in placing his patient under the most favourable circumstances for nature to effect her cure. And it is largely this belief in conquering nature by obeying her, lighted up by a certain after-glow of the hopelessness already spoken of, which has caused so much of the energy of the medical profession to be thrown into the preventive service. Nor would it be well entirely to forget that it was in that branch of medicine whose professors wield the knife, and where the results of treatment can most easily be gauged, that the study of the minute living organisms which attack diseased or exposed tissues exercised the mightiest influence in curative treatment; and that the names of Lister and of Koch have marked an epoch not alone in the surgery of wounds, but also in the general history of preventive medicine. While, therefore, the ancient physician was strong chiefly in his acquaintance with, and prophecy as to the probable results of, the processes he saw going on, the modern hygiest attempts to grapple with the remoter causes of those processes themselves, not in the individual alone, but also in the community.

When every rood of land supported its man many of the conditions we have nowadays to face and remedy may have had no existence. The air was fresh; there were no mill chimneys, no foul sewers, no offensive cesspits to make it otherwise; the water was pure: it came unsullied from high untrodden hills or well-filtered from clear springs; the food man ate was plentiful, and worked off by ample exercise; while of business worries he had none. In this Arcadian simplicity possibly he lived; myself I doubt it much. Man has ever been gregarious and ever unwilling to clear away materials for which he has no further use; he has been ever ready rather to get rid of wastes by the natural drainage channels of the country; and bacteria, though unnamed, had their existence all the same.

While, therefore, the country wight had on the whole an immense advantage over the denizen of the town, he was not free from ague on his undrained land; he was subject from time to time to outbreaks of disease from polluted water-supply; nor was he free from poisons generated in the food he had taken means to preserve. Scorbutic complaints were common enough in country districts of England, where fresh food was the exception rather than the rule; but it was after all in towns that the necessity for sanitation was first felt and earliest recognised. When big populations grew up round the graves of their ancestors and drank the water filtered through the subsoil of the churchyard; when huge unventilated factories immured for long hours men, women, and little children, away from light and air; when amongst the masses huddled together the germs of typhus fever or of small-pox ran riot men began to ask: "Were these things needful?" When cholera at length came to our shores and ravaged towns and villages a new era for preventive medicine dawned. Formerly it had been they that were sick, not they that were whole, that sought the physician. But when this Asiatic scourge swooped down upon our towns and villages, carrying away strong men in their strength, people began to repeat and emphasise the question, "Must these things be?" Much learned labour was spent in the study of the disease, but it was etiological inquiries, such as those of Dr. Snow, which pointed to the measures which would do so much, not only to prevent cholera itself, but which would lessen our liability to other and indigenous zymotic diseases. It soon came to be felt that there was a class of maladies, such as relapsing fever, typhus fever, and small-pox, which flourished best only in crowded neighbourhoods; and that there was another class, such as typhoid fever, especially apt to become prevalent where the water-supply was polluted. Nor was it long before it was also seen that such conditions as overcrowding and foul air, polluted drinking water and unwholesome food, were etiological factors in the genesis of diseases other than zymotic, and that not only might undrained fens produce ague, but that damp houses favoured rheumatisms and neuralgias, and generally deteriorated the health of their occupants and lessened their power of resistance to disease. It was noted that accumulations of spent matters about our houses were themselves a cause of illness, and that even where we freed these accumulations from certain of the fouler contaminating substances, conducting the latter by channelled passages direct from the house to the cesspool or the sewer, that these channels themselves became sources of danger. Nor was this danger greatly, if at all, lessened when the idea was suggested of placing traps in the course of these drains to intercept effluvia generated afar off in the sewer. These traps it was soon found were themselves effluvium producers close at hand, and a system of relieving all pressure in our drains and disconnecting all house wastes from them, as well as of rapidly removing all solid accumulations, came to be regarded as essential to the well-being of a community. Then building by-laws and nuisance inspectors became essential, and every large town provided, either directly or by means of some company, for the supply of water of such purity as might be obtainable.

It had been long acknowledged that certain diseases were wont to spread from man to man, and more particularly from child to child. The ravages of scarlet fever, measles, and small-pox it was found were too little influenced by general sanitary improvements. The last, indeed, was perfectly controlable by means of vaccination. To this process, however, as the disease became less known and less feared, there grew up a not unnatural repugnance on the part of parents, who were unwilling to subject their children to the risk, however slight, of a possible blood poisoning in order to protect them from a disease which their grandfathers had

been wont to dread. Then arose the question whether by the separation of the sick from the healthy—at their homes where practicable and, where that was not so, in properly equipped hospitals,—something might not be done; and it came gradually to be recognised as a duty to the community that notice of the existence of these communicable diseases should be given to the sanitary authority.

It had been found advisable for health purposes that the country should be mapped out into districts, and these placed under the care of properly constituted authorities. These authorities were charged by law with the duty of examining their districts from time to time to seek for certain things which had come to be regarded as nuisances to be dealt with in a summary manner. This searching for nuisances was performed in some instances in a somewhat perfunctory manner; in a few it was probably not performed at all. While many authorities were anxious in every way they knew to promote the health of those under their care, there were those some of whose members regarded every suggested departure from the old order of things as a medical fad, and opposed to all projected improvements that stolid resistance which the reformer has ever had to fight. Such men when a capable inspector reported on conditions now universally acknowledged to be unhealthy would meet his suggestions with the question, "Has anyone complained?" To such an extent did these obstructionists impede the working of the new sanitary machine it was their office to promote that even more intelligent members of sanitary bodies came to regard the duty of the inspector as one simply of investigating complaints. With the small staff engaged by most authorities the inspector who did no more than this was still often sufficiently actively employed; but the Local Government Board have for many years continued annually to impress upon medical officers of health the desirability of a systematic investigation of some portions of their several districts. Meantime the growth of feeling in favour of the prevention of communicable diseases had induced the health authorities in many large towns to desire and obtain Parliamentary sanction for a system of disease notification. In these towns it was soon felt that, important as the notification of the communicable diseases was in preventing their further spread, scarcely less important was the opportunity such notification afforded of making a complete examination into the sanitary condition of the dwellings where the cases had occurred. Hitherto it had been generally on complaint made that a dwelling was examined. The introduction of a Notification Act enabled the medical officers in such towns with a good grace to press for the examination of every house in which an infectious disease was known to have occurred. Where this was done it was soon found that serious sanitary defects, entirely unknown to their occupants, had often existed in dwellings, and of which, consequently, had an infective disease not broken out nothing would have been heard. These circumstances strengthened the hands of those who were already pressing upon their authorities the desirability of systematically examining their districts. In one town of which I know something every house was examined in this systematic manner. Certain information as to the number of occupants, the number of rooms, and the means of ventilating them, the nature of the water-supply, the kind and efficiency of the drainage arrangements, and the sufficiency and situation of the sanitary conveniences, was collected, along with additional information as to any complaints made by the occupiers about nuisances in the dwelling or its immediate neighbourhood. Without claiming that the whole or even the chief part of the improvement in the health of that town was due to such examination, I would, however, remark that the death-rate, which had averaged for the five years preceding this house-to-house examination 22·3, has averaged during the last five years only 18·6—an improvement of more than 16 per cent. Had the authority insisted on the removal of all sanitary defects so discovered the improvement would probably have been even greater.

Examinations thus made, sometimes in pursuance of a systematic plan, sometimes on account of the outbreak of disease in the near neighbourhood, have again and again revealed the existence of dangers to health of the most appalling kind. To find, for instance, in a row of new houses, in one of which a case of diphtheria has appeared—houses built under modern by-laws and carefully inspected when built; houses with every waste cut off from the sewer, and all the sanitary conveniences outside the dwelling—that a strong-smelling chemical introduced into the sewer penetrated into the house itself in seven out of the ten was startling indeed. This indicates of course that there was a distinct connexion between the air of the sewer and that of the house, and shows the importance of investigating these conditions even in houses as to the sanitary condition of which no complaint has ever been made. Such instances I fear are not uncommon. They go to show that even modern building by-laws, carefully carried out by able inspectors, will not necessarily guarantee a few years later the healthiness of a house.

But what about houses constructed where the by-laws were not modern? In all our large towns there are many houses with wastes not severed from the sewers. In a recent investigation on the outskirts of a large town of some 100 contiguous houses, all more or less recently built and of which nearly two-thirds had all their wastes cut off and the remaining third not, it was found that the smell of a chemical entered the house through the drains in 19 per cent. of the former and in 60 per cent. of the latter. Such instances as these, which could doubtless be multiplied from every large town, seem to point strongly to the importance of a systematic examination of all houses, old and new, house by house, street by street, ward by ward.

It will, I know, be urged that people will object to the examination of houses where no complaint is made. On the contrary, experience shows that they welcome it. Even in the few cases where some hesitation is at first manifested all opposition is got rid of when the object and importance of the visit are properly explained. Practically, therefore, this difficulty has no real existence. It must also be remembered that cottagers are sometimes terrorised by landlords or their agents, and dare not make any complaint, even of the most flagrant nuisance. Such landlords are fortunately not very common, but I have known notice to quit follow a suspected communication with the sanitary authority. Does it not seem a little absurd that necessary sanitary improvements should have to wait till our attention is directed to the house by the notification of some case of infectious disease or the registration of some death altogether preventible? If our sanitary service is to deserve its name must we not everywhere investigate the conditions to be found and insist on the removal of those which are well known to be unwholesome, before, and not after, they have led to disaster?

It is now universally admitted that the inhabitants of large towns must be provided with an adequate supply of pure water; that food offered for sale must be strictly and carefully inspected; that our ashpits and our courtyards must be frequently and periodically cleansed; and that the healthy must be protected from contact with the infected. And yet in how many cases do workmen follow their employment in damp or confined workshops? How many persons live in unwholesome dwellings and we hear no word of complaint till some infectious disease breaks out or some one dies? Is it not, I repeat, rather our duty systematically to visit all houses, all workshops, and to ascertain beforehand whether the conditions there present are those which favour or destroy the health of those they are intended to shelter and protect?

ON HICCOUGH.

BY JOHN O. LEONHARDT, M.D.

I HAVE been much interested of late in the perusal of articles on this subject appearing in THE LANCET and other medical periodicals. Medical literature seems to be singularly deficient on the subject of hiccough, which for centuries has been, and still is, one of a number of neurotic harlequins. Nothing is more common, trivial, and easy to treat than a mild attack of singultus, and yet, when it appears in its grand types, nothing is more distressing to the patient and harassing to the physician than this convulsive affection of the diaphragm.

Upon referring to my case book I find that on Sept. 14th, 1878, I was called to see a man who had hiccoughed incessantly for two days and nights. I found the patient to be a large, plethoric person aged sixty; his pulse was rapid and small, the skin hot and dry, and he suffered from great restlessness with busy delirium, together with coughing and hiccoughing with every inspiration. It was impossible to

determine with any degree of accuracy the condition of the lungs and heart owing to the agitation of the patient and the great commotion within the chest. The patient appeared to be in a very critical condition. I prescribed an active hydragogue and half a grain of sulphate of morphia by the mouth. The cathartic acted in a short time and the patient fell asleep, but the hiccough continued. I then began to use antispasmodics and sedatives, and tried counter-irritation and everything that might be expected to quiet the spasm for about a week, but without the least effect. Death seemed inevitable. Just "for the sake of doing something" I then ordered twenty drops every half hour of a mixture containing equal parts of acetic and sulphuric acids. An unexpected and decided improvement took place, and my patient became convalescent within twenty-four hours. He had hiccoughed constantly, day and night, awake or asleep, under the influence of hypnotics or not, for eight days. He removed farther west, and recently I learned that about ten years after the attack of 1878 he died from a similar attack.

My attention having been attracted by numerous communications on this subject occurring in many medical as well as lay journals, I have looked over the literature of hiccough, or, rather, as much of it as I have in my library. Thinking that the result of my explorations may at least interest, if not benefit, some fellow practitioner, I submit a few observations that seemed to me both interesting and instructive. Citations are appended in order that those who desire to refer to any particular case may easily do so.

1.—A male negro, aged forty, was admitted to the Hospital Hôtel Dieu for chills, dyspnœa, and hiccough. He would hiccough constantly for five or six minutes and then enjoy a short period of rest. Bleeding, cupping the epigastrium, and hydrocyanic acid, used internally, were resorted to, but with no effect. After twelve days he recovered while taking laudanum and ammonia.

2.—Dupuytren cured two violent and obstinate cases by use of the actual cautery applied over the xiphoid cartilage.

3.—De Meza of Helsinfors reports a case in a male aged sixty, corpulent, phlethoric, and addicted to "bacchanalian pleasures," who, having suffered for nine days from gastric disturbance, took an emetic, and immediately a violent and unceasing hiccough ensued. Asafœtida, camphor, musk, venesection, &c., were all tried in vain. After lasting for three days the spasms ceased under a blister applied to the abdomen.

4.—Dr. Barlow reports a case in a male aged sixty-one, suffering from migratory rheumatism. When he moved his shoulders it would bring on a paroxysm of hiccough, and that even when the rheumatism had settled in his ankles.

5.—Mindiere, in the *Revue Medicale*, directs attention to the influence of malaria on the viscera and its expression in severe hiccough. In support of this a case is reported of a countryman who, recovering from an attack of ague, was seized with a violent hiccough which, in spite of opiates, blisters, and antispasmodics, persisted for nine days, when it disappeared under enemata of quinine.

6.—Case of a young lady troubled with chronic gastritis, who hiccoughed for an hour daily, which yielded only to galvanism on the forty-second day. Dr. Jones of New Orleans has found that faradaism is best in asthenic and galvanism in sthenic cases.

7.—Dr. Boyer reported three cases, in which everything was tried without good effect, where the hiccough yielded to forcible compression of the epigastrium continued for twenty-four hours at a time.

8.—M. Latour reports a case in a male aged forty-six years, very nervous and of weak constitution, who suffered severely for three hours and was cured by inhaling chloroform.

9.—Dr. Schneider of Berlin reports having cured many cases of violent and persistent hiccough by giving dilute sulphuric acid. In this treatment Dr. Duncan of Edinburgh and Dr. Jacobson of Berlin concur.

10.—Dr. Danet, in a severe case following great mental disturbance and associated with headache and vomiting, after trying a great number of antispasmodics in vain, mastered the hiccough with a pill containing three-quarters of a grain of valerianate of zinc and a small quantity of belladonna.

11.—Leon Boyer reported three cases: one a female aged eighteen suffering from suppressed menses; the second a male aged twenty-five troubled with "oppression"; and a third of which no particulars are given. After using many remedies and methods all three were cured by firm compression of the epigastrium. This treatment was suggested to him by Professor Rostan, who in turn got it from Bordeu, who long ago recommended a tight bandage around the epigastrium.

12.—The value of morphia injected hypodermically is admirably set forth by Dr. Edward T. Wilson.

13.—Dr. Constable treats of hiccough as a complication of pneumitis, and recommends the subcutaneous injection of morphia.

14.—Dr. Jauariz mentions the case of a Spanish physician who, having recovered from an attack of gastric fever, was seized with an obstinate hiccough. After sixty hours of suffering—during which he took emetics, revulsives, antispasmodics, &c.—he besought his wife to give him a drink of linseed tea. She gave him by mistake an infusion of mustard. His hiccough immediately disappeared. This modification of the treatment of Rhazes proved effective in his hands in the case of a lady afflicted in the same manner, every other treatment having been unsuccessful for twenty days.

15.—Dr. Rose relates that Widal cured a nineteen-day old case with twelve grains of quinine daily for three days, and speaks of another cure in which valerianate of zinc and belladonna were used, and still another cured with Vichy water and gentian. He recommends the use of ether spray to the neck and epigastrium.

16.—Dr. Ringer's case of hiccough in an Indian trooper, the victim of syphilis in the rupial stage, resisting all kinds of hypnotics and antispasmodics, also counter-irritation and calomel. He finally obtained a good result after thirteen days by giving large doses of potassium iodide, applying a blister over the phrenic nerve and giving iced water to drink.

17.—Dr. Fritsch reports a case of hiccough in a married female suffering from "excoriation at the portio vaginalis uteri, with a cervical catarrh," which ceased only when the genital affection was cured after a treatment lasting three months.

18.—Dr. Favier reports a case that lasted three weeks, and which abated under tourniquet pressure over the epigastrium, morphia, the actual cautery, musk, quinine, chloral, &c., being of no use.

19.—Belot found compression of the phrenic nerve on a level with the hyoid bone very effective in hiccough accompanying yellow fever.

20.—Dr. Ortille cites a case of hiccough following cerebral embolism, in which a multitude of remedies had been tried, and which yielded to half a grain of pilocarpine hypodermically. In this case the hiccough persisted during sleep and disappeared during the profuse perspiration and salivation induced by the drug.

21.—Dr. Barre reports a remarkably persistent case in a male aged forty-five, suffering intense grief. Everything imaginable was done without success. At the end of two years, and for the mere sake of doing something, an œsophageal probang was passed. This caused a syncopal attack, but cured the hiccough. Carcassonne employed the same measure.

22.—Dr. Ortille relates a case of hiccough in a female aged fifty-six which had continued for seven months. In this case a decoction of four grammes of jaborandi leaves and stalk, to be taken in two doses fifteen minutes apart, was prescribed. It cured the patient in two hours. No reason is given why the crude drug was preferred in this instance to the active principle generally employed.

23.—Dr. Warren of Danville, Kentucky, recommends to "hold the breath as long as possible: the trisplanchnic nerve is held in abeyance until the pneumogastric, which is off its guard, can get back to its post." This method is in line with Cruveilhier's, which consisted in pouring water into the patient's mouth until he was about to suffocate. It may also "explain" why forcible expiration, cold douches, sudden alarm, sneezing, straining with the glottis closed, and Carcassonne's forcible flexion of the head upon the chest for five or ten minutes at a time, are all occasionally successful.

24.—Dr. Rihl reports two cases of hiccough, one in a male aged thirty-five, following an attack of syncope; it continued for many months in spite of the use of "the web of the black spider," and ultimately wore itself out; the other in a female aged forty, who for twenty years had been afflicted with some obscure form of spinal disease. Among the remedies used in the second case may be named grindelia robusta, turpentine, chlorinated soda, Hoffman's anodyne, cypripedium, bicarbonate of soda, and oil of amber. She hiccoughed fourteen weeks out of seventeen, and no result of the case is given.

25.—Dr. Foote relates several remarkable cases in a very

lucid and instructive manner. One, a male aged fifteen, dyspeptic, after having undergone many kinds of treatment was cured with a pill containing one grain of iodoform, one-third of a grain of cannabis indica, and five grains of extract of conium, at the end of twenty-six weeks of affliction. In another case a female aged twenty-two, after seven months of hiccoughing, was cured by electricity. A third case, that of a girl in which the hiccough was induced by severe fright, proved fatal.

26.—"R. H. P." cured a number of cases by the inhalation of tobacco smoke.

27.—At a meeting of the St. Louis Medical Society in the winter of 1882 a case of hiccough was exhibited that had been active for twelve years, and still proved refractory to all treatment.

28.—Mr. Lea mentions the case of a man who was tormented with hiccough with every irritation or the least exertion. Ten-drop doses of tincture of opium afforded most relief. The necropsy revealed cancer of the stomach.

29.—Dr. Bernstein reports an interesting case with necropsy. A male aged forty-four was admitted to the Borough Hospital, Birkenhead, for hiccough and pain in the lower part of the back and loins. He was subjected to many remedies without permanent relief. Croton oil did more good than any other drug. At the necropsy nothing appeared to explain the hiccough unless it was that a caseous deposit at the apex of each lung might have impinged on the vagus or phrenic nerves.

30.—Dr. Kingsbury narrates a case of hiccough that persisted during sleep in a male aged fifty. It followed a vertiginous attack. Purging, blisters to the abdomen, potassium bromide, acetic acid, chloroform, hydrocyanic acid, and pressure over the phrenic nerves were all tried, but to no purpose. He was cured after twelve days with chloral hydrate.

31.—Dr. Pipino of St. Louis, Mo., reported a distressing case of hiccough in a male aged seventy-three in which every ordinary remedy failed and which finally was cured by the subcutaneous injection of three centigrammes of pilocarpine.

32.—Dr. Pagenstecher, in a bad case of obstinate hiccough, having canvassed the whole range of probable medicine, found a decoction of jaborandi leaves curative on the sixth day. Noble and Stiller warmly recommend this treatment.

33.—Dr. Ruhdorfer mentions a case in a female in which sedatives, emetics, irritants, catharties, cupping, &c. were tried for three months. A successful result followed the hypodermic injection of three centigrammes of pilocarpine in a gramme of water. The hiccough stopped as if by magic.

34.—Dr. Ramos of Brazil recommended refrigeration of the lobe of the ear, slight cold being sufficient. Even the application of cold water proved curative in hiccough regardless of its cause.

35.—Dr. Churton describes an intermittent form of hiccough in a neurotic and dyspeptic female aged twenty-five. The first attack, lasting ten days, ceased after the subcutaneous injection of morphia and inhalation of chloroform. After one week it began again and continued eleven days, when it was stopped in ten minutes with a hypodermic injection of one-fourth of a grain of pilocarpine. In two subsequent attacks pilocarpine acted admirably, but in a fourth it proved useless, but scutellaria in drachm doses proved curative. This last drug acted well in another case.

35.—Dr. Bonavia reports a case in an adult male that followed an attack of intermittent fever, and it is said that everything proved futile except drachm doses of fluid extract of ergot. Quinine does not appear to have been given a trial.

37.—Dr. Dresch of Foix, France, speaks of a method, not original with him, but very effective, in which the patient's external auditory canals are firmly closed with his fingers and he is caused to take a few sips of fluid from a cup held by another person.

38.—Dr. Luke recommends a teaspoonful of pulverised sugar given with an equal volume of vinegar at one dose.

39.—Dr. Leloir reports a case in a female aged twelve. After trying everything for a year he finally practised compression of the phrenic nerve between the two sterno-clavicular attachments of the sterno-mastoid muscles for three minutes at a time with curative effect.

40. Dr. Smart, in a case of hiccough occurring in an adult male suffering from chronic alcoholism, after trying for four or five weeks to control the spasm, used inhalations of chloroform with success.

41.—Mr. Slevin reports a case of hiccough that continued during sleep in a male aged seventy-eight who had recovered from an attack of gastric catarrh. "Every remedy of any repute" was tried. It ceased upon the inhalation of snuff, which caused sneezing. It had been constant for twelve days.

In the foregoing observations it will appear that pilocarpine, epigastric compression, morphia, and chloroform are the mainstays of several able practitioners in the treatment of this disorder. It will also be seen that hiccough in aged males is of shorter duration, as a rule, than in young females. Among the causes are found any irritation of the phrenic nerves, whether reflex, central, or peripheral. Its occurrence is common in the advanced stages of fatal diseases of all kinds: in uræmia, cholera, dysentery, gangrene, hæmorrhage, low fevers, and adynamic states generally; in apoplexy, hydrocephalus, meningitis, embolism, acute gastritis, cancer of the stomach, pericarditis, aneurysm, pneumonia, intestinal obstructions, strangulated hernia, and the passing of renal and hepatic calculi; in mediastinal pleuritis, fracture of the ribs, malaria, gouty inflammation of serous membranes near the diaphragm, spasmodic stricture of the œsophagus, affections of the larynx or pharynx, and enlargements along the sides of the thyroid or in the course of the phrenic nerves; in many diseased conditions of the liver, spleen, pancreas, ovaries, uterus, prostate, &c.; even from ingestion of irritating substances, solid or fluid, so common in those addicted to rapid eating, gourmandising, drunkenness, &c.; excessive crying or laughter is sufficient to cause hiccough in children and those of unstable nervous systems.

While the above excerpts will doubtless puzzle the "symptom doctor," the pathologist and real clinician will have no difficulty in distinguishing the real from the apparent. It certainly appears plainly that hiccough is not a disease *per se*, but rather a neurotic equivalent occurring in many different diseases. While obscure but trivial nervous conditions may coexist with a paroxysm of singultus which is usually readily amenable to simple measures often of a psychical character entirely, hiccough may be of so threatening and obstinate a nature that the resources of the ablest may be of no avail. It is in cases of the latter kind that a primary morbosity, if sought for, can, I believe, usually be found, and of which the diaphragmatic convulsions, though all-absorbing, are really but like the white crests of waves that, however conspicuous, are distinctly dependent upon the energy of sun and wind and water. Hiccough is not a disease; it belongs to a class of imposing symptoms of which neurasthenia, dropsy, jaundice, fever, &c. are examples. The physician who permits himself to be deceived by the boisterous qualities of any disease shadow, which he assails regardless of the character of the real pathological substance that casts it, lacks medical acumen and exposes his patient to much unnecessary suffering and possibly danger.

Bibliography.

1. Johnson's Medico-Chirurgical Review, July, 1827, p. 196.
2. American Journal of the Medical Sciences, November, 1828, p. 209.
3. Johnson's Medico-Chirurgical Review, January, 1836, p. 195.
4. THE LANCET, vol. ii. 1840, p. 295.
5. Johnson's Medico-Chirurgical Review, January, 1842, p. 192.
6. THE LANCET, vol. i. 1843, p. 609.
7. Rankin's Abstract, July, 1847, p. 61.
8. London Journal of Medicine, April, 1849, p. 365.
9. British and Foreign Review, January, 1850, p. 284.
10. Gazette Hebdomadaire, Oct. 10th, 1862.
11. Rankin's Abstract, January, 1866, p. 97.
12. St. George's Hospital Reports, vol. iv., 1869, p. 19.
13. THE LANCET, vol. ii. 1869, p. 264.
14. Revue de Thérapeutique Médicale-Chirurgicale, June 1st, 1870.
15. THE LANCET, vol. ii. 1871, p. 181.
16. THE LANCET, vol. i. 1876, p. 108.
17. Philadelphia Medical and Surgical Reporter, vol. i. 1876, p. 190.
18. American Lancet, 1878, p. 626.
20. Dublin Quarterly Journal of the Medical Sciences, vol. i. 1879, p. 470.
21. American Lancet, vol. ii., 1879, p. 42.
22. Philadelphia Medical and Surgical Reporter, vol. ii. 1879, p. 41.
23. THE LANCET, vol. i. 1880, p. 587.
24. Philadelphia Medical and Surgical Reporter, vol. i., 1880, p. 155.
25. Dublin Quarterly Journal of the Medical Sciences, vol. ii. 1881, p. 541.
26. Brit. Med. Jour., Nov. 12th, 1881, p. 804.
28. THE LANCET, vol. i. 1883, p. 392.
29. THE LANCET, vol. i. 1883, p. 10 3.
30. Brit. Med. Jour., vol. i. 1884, p. 103.
31. Dublin Quarterly Journal of the Medical Sciences, vol. i. 1884, p. 527.
32. American Journal of the Medical Sciences, vol. i. 1885, p. 571.
33. Brit. Med. Jour., vol. ii. 1885, p. 965.
34. THE LANCET, vol. ii. 1885, p. 189.
35. Brit. Med. Jour., vol. ii. 1886, p. 1156.

36. THE LANCET, vol. ii. 1885, p. 276.
37. American Practitioner and News, vol. i. 1888, p. 284.
38. American Journal of the Medical Sciences, vol. ii. 1889, p. 609.
39. Ibid., vol. i. 1892, p. 612.
40. Braithwaite's Retrospect, vol. i. 1892, p. 245.
41. THE LANCET, vol. ii. 1895, p. 92.

Lincoln, Nebraska.

NOTES ON THE BACTERIOLOGICAL EXAMINATION OF THE THROAT IN SOME FEVERS.

BY J. O. SYMES, M.B., L.R.C.P. LOND., M.R.C.S. ENG., D.P.H., &c.,

ASSISTANT MEDICAL OFFICER, LONDON FEVER HOSPITAL.

DURING the past twelve months a bacteriological examination of the throat has been made in all cases admitted to this hospital in which there were signs of exudation on the fauces. Cultivations have also been made from time to time from throats presenting no abnormal appearances. As a rule, the cultures were taken upon admission, but some after a stay of from two to eight weeks in the wards. A sterilised swab of cotton-wool upon a rod was passed lightly over the fauces and tubes of blood serum inoculated from this. The publication of a brief summary of the notes of the first 100 cases so examined may be of interest at the present time, in view of the increased attention paid to the bacteriology of diphtheria. All the cases were under the care of Dr. J. W. Washbourn, and it was at his suggestion that the examinations were made.

SCARLET FEVER.

Bacteriological examinations were made of exudation from the throats of 68 patients suffering from scarlet fever; 52 were made on the day of admission, 8 during the first seven days, and 8 at periods varying from the third to the eighth week. Of these cultivations 14 showed pure streptococci, 25 streptococci and cocci in groups, 2 cocci in groups, 1 cocci and the long variety of diphtheria bacillus, 9 cocci and the short variety of diphtheria bacillus, 14 cocci and other forms of bacilli, and 3 showed various forms of bacilli only. The bacillus most frequently found was a short, stout variety with a central non-staining portion. It was arranged in chains or groups, and liquefied serum in from three to six days.

Case in which the long variety of diphtheria bacillus was found.—A child aged eighteen months had a mild attack of scarlet fever. During the seventh week there was rhinorrhœa, but no membrane could be seen in the nasal cavities. A culture taken during the eighth week showed greyish, raised, and liquefying colonies, which proved microscopically to consist of cocci and diphtheria bacilli of the long and short varieties. A pure culture of the long variety proved virulent to guinea-pigs. Seventeen days later the discharge ceased and cultivations showed cocci only. The temperature did not rise above the normal; there was a slight trace of albumin in the urine. No paralysis followed, and the child made an uninterrupted recovery.

Nine Cases in which the "Short Variety of Diphtheria Bacillus" was found.

CASE 1.—Much exudation on fauces. Cultivation taken on admission showed cocci and short diphtheria bacilli, which persisted until the seventh week. The throat cleaned quickly, but fresh exudation appeared on the tenth day after admission.

CASE 2.—Culture taken on admission showed in twenty-four hours raised white colonies of cocci and the short variety of diphtheria bacillus. There was much exudation on the palate and fauces, which cleared to return again on the thirteenth day. Bacilli were present up to the sixth week. Slight nephritis was present.

CASE 3.—Exudation on fauces. Culture taken on admission showed raised white colonies in forty-eight hours, streptococci and short variety of diphtheria bacilli. The patient subsequently developed paresis and anæsthesia of the palate, albuminuria, and loss of knee-jerks. Cocci only on twenty-second day.

CASE 4.—Exudation on tonsils and palate. Culture taken on admission in eighteen hours showed liquefying and white raised colonies of large oval cocci, streptococci, and short variety of diphtheria bacilli. Six weeks later cultivation from throat showed cocci only. There was slight nephritis.

CASE 5.—Rhinorrhœa three weeks after admission. The nasal cavities were coated with white fibrinous exudation. Culture in twenty-four hours showed raised white colonies of oval cocci and short diphtheria bacilli. No paresis or albuminuria followed.

CASE 6.—Culture from fauces, which showed no sign of exudation, was taken on admission, and showed fine, raised, white colonies in twenty-four hours, cocci and short variety of diphtheria bacilli. Seventeen days later a second cultivation from the throat showed cocci only. At no period of the case was there any abnormal appearance of the fauces, and recovery from scarlet fever was uninterrupted.

CASES 7, 8, and 9.—On admission the fauces showed no exudation, nor did any throat trouble subsequently develop. Cultures taken on admission showed in twenty-four hours colonies of streptococci and of short diphtheria bacilli. In Case 8 short diphtheria bacilli were still present three weeks after the date of admission.

DIPHTHERIA.

Cultures were made from the throats of 18 persons sent to the hospital certified as suffering from diphtheria. The cultivations were taken on admission and examined after periods of incubation ranging from sixteen to forty hours. In 10 out of the 18 cases long diphtheria bacilli were found.

CASE 1.—Raised, round, white colonies were present in twenty-four hours of the long and short varieties of diphtheria bacillus. The short bacilli were demonstrated as present in the throat twelve weeks after admission. A pure culture was not virulent to guinea-pigs. The patient was treated with antitoxin. No paresis occurred.

CASE 2.—Cocci in groups and long diphtheria bacilli. Bacilli present until sixth week. No paresis. Antitoxin used.

CASE 3.—Cocci in groups and long diphtheria bacilli, which were absent on thirteenth day. Patient had tachycardia of several days' duration. No paresis of palate or other muscles.

CASE 4.—Streptococci and long diphtheria bacilli. Bacilli had disappeared by twentieth day. Complete loss of knee-jerks.

CASE 5.—Long diphtheria bacilli, which persisted up to thirty-first day. Anæsthesia and paresis of palate. Treated with antitoxin.

CASE 6.—Liquefying colonies of cocci, long variety of diphtheria bacilli. Died seven days after admission from cardiac failure. Treated with antitoxin.

CASE 7.—Long and short diphtheria bacilli. Culture on twenty-third day showed cocci only. Paresis of palate followed. Antitoxin given.

CASE 8.—Long variety of diphtheria bacillus. Streptococci and cocci in groups. Five weeks after admission cocci only. Paresis of palate. Antitoxin used.

CASE 9.—Long variety of diphtheria bacillus and streptococci. No paralysis followed attack. Antitoxin used.

CASE 10.—Long variety of diphtheria bacillus and large oval cocci. Culture taken nine days after admission showed cocci only. On sixteenth day there were fresh membrane on fauces, rise of temperature, and some albuminuria. Cultures showed long diphtheria bacilli, which were again absent from cultures taken during fourth week. No paresis. Antitoxin given on admission and repeated on sixteenth day.

Eight Cases certified as Diphtheria in which the Klebs-Löffler Bacillus was not found.

CASE 1.—Much exudation on palate and fauces. Cultures showed torulæ, streptococci, and cocci in groups. Patient developed a well-marked attack of enteric fever, and at no time was there evidence of diphtheria.

CASE 2.—Exudation on tonsils. Culture showed colonies of streptococci and of staphylococci pyogenes aurei. This proved to be a case of scarlet fever and desquamated freely.

CASE 3.—Profuse acrid nasal discharge containing streptococci and streptobacilli. In a subsequent cultivation streptococci, staphylococci pyogenes aurei, and short liquefying bacilli were present. A case of scarlet fever which desquamated. Nine weeks after admission pus from cervical abscess showed streptococci.

The remaining 5 cases were regarded as cases of tonsillitis. Cultures yielded the following results.

CASE 4.—Streptococci and cocci in groups.

CASE 5.—Streptococci. Sloughing tonsils and apex pneumonia.

CASE 6.—Streptococci, cocci in groups, and short, stout

oblong bacilli. Culture taken on third day showed cocci only.

CASE 7.—Cocci in groups.

CASE 8.—Streptococci and large oval cocci.

In none of the eight cases mentioned above was loss of knee-jerk or any symptom of paralysis observed.

RUBEOLA.

Cultivations were taken from the throats of 14 cases of rubeola. Colonies of short, stout bacilli, sometimes in chains, which liquefied serum in forty-eight hours were found in 3 cases. Two of these had exudation upon the fauces. Similiar bacilli, together with cocci in chains and groups, were found in 4, streptococci alone in 1, and streptococci and staphylococci in 3 cases. Cultivations from the three remaining cases showed colonies of cocci, together with the "short variety of diphtheria bacillus."

CASE 1.—Forty hours culture showed large, white, raised colonies of cocci and short diphtheria bacilli. Cultivation taken three days after admission gave the same result. On the thirteenth day after admission cocci only were found. There was a patch of whitish exudation on the palate that persisted for nine days. Slight trace of albumin in urine. A pure cultivation was not virulent to guinea-pigs.

CASE 2.—Forty hours culture showed circular white colonies of cocci and short diphtheria bacilli, which were present until the thirteenth day after admission. The fauces were slightly coated with whitish exudation. Faint trace of albumin in urine.

CASE 3.—Forty hours culture showed white raised and transparent raised colonies of short diphtheria bacilli and of streptococci. The bacilli were present in a culture taken on the ninth day. There was no exudation on the fauces.

There was no evidence of diphtheria in the further history of any of these cases.

Remarks.—The necessity for a bacteriological examination in all supposed cases of diphtheria is sufficiently obvious. It is worthy of notice that in none of the eighteen cases admitted certified as suffering from diphtheria was "the short variety of diphtheria bacillus" found. Of the nine scarlet fever and three German measles cases in which this bacillus was detected only one (Case 3, scarlet fever) presented clinically the features of diphtheria. Dr. Washbourn tested pure cultures of the "short variety of diphtheria bacillus," obtained from some of the above-mentioned cases, but none were virulent to guinea-pigs.

Southwick-street, W.

PNEUMONIA AFTER INFLUENZA.

BY GUTHRIE RANKIN, M.D. GLASG., F.R.C.P. EDIN.,
LATE MEDICAL OFFICER, WARWICK DISPENSARY AND COTTAGE HOSPITAL.

IN the outbreak of influenza which developed so suddenly over this country in February last, and which happily has now subsided, pneumonia was the complication most to be dreaded and was the immediate cause of death in a large proportion of cases. In previous epidemics pneumonia has always been a common sequela, but in the present instance the examples which have come under my observation have presented certain characteristics strikingly different from the ordinary type of the disease. This year's epidemic first broke out in this neighbourhood in an institution which comprises a resident population of close upon 150, and the cases to which the present notes refer, though not essentially different from others met with in outside practice, were brought under notice with special prominence because of the concurrence under one roof and at one time of several bearing the same characteristics and exhibiting the same departures from the ordinary standard. Very few of the 150 escaped the attentions of the disease: many were so slightly ill as to require little care; others experienced an ordinary attack of the malady, which incapacitated them for three or four days, but which left them at the end of that time practically well; while a few had to contend with it in a more pronounced form, and of this latter number five suffered from pneumonia. The hygienic arrangements of the institution are well devised, carefully looked after, and the average health of the inmates leaves nothing to be desired. Of the whole number attacked by influenza, only seventeen were acutely ill, and, except the cases now under consideration, they all recovered completely and within a comparatively short time. The matron, who was the first victim of pneumonia, died from cardiac failure on the eighth day of her illness. Her case proved fortunately to be the only fatal one, and while the leading features of her attack were the same as in all the others her chances of recovery were lessened by the previous existence of a complicated form of heart mischief. Of the other four cases one was mild and abated on the fourth day, another resolved by lysis, and the remaining two by crisis, each on the eighth day of the illness. It should perhaps be noted that the case which resolved by lysis was the son of parents who were first cousins and in whose family history there was a pronounced phthisical taint. The symptoms of all five cases were strikingly similar, and a short description of one will best serve to call attention to the unusual features of the whole series.

A lad aged fifteen, with a fair physique but with a neurotic diathesis, was seized with influenza in a sharp but ordinary form. From this he emerged like his neighbours, but on the third day from the date of recovery from his influenzal attack he complained of not feeling so well. His temperature in the morning was 100° F., but there was then nothing to suggest the advent of inflammatory mischief anywhere. In the afternoon the temperature rose rapidly to 105·4°, the pulse was 120, and the respiration 44. There had been no rigor, he had no cough, no pain, and he complained of nothing but shortness of breath and thirst. Next morning the temperature was 100·4°, the pulse 100, and the respiration 40. He still had no pain and the cough was trifling, but he had constant nausea and occasional attacks of active sickness. Later in the day his temperature gradually rose to 103·4°, and in the evening it reached 105·2°. Under the influence of quinine and cold-packs it receded, but at 10 o'clock the following morning it again reached 104·6°, the pulse being 100 and the respiration 38. There was no cough, but that morning he had twice expectorated some frothy mucus of a bright red colour; the nausea continued. He complained of wandering pains over his right side, which he mostly referred to the axillary region above the level of normal liver dulness, but physical examination failed to reveal any explanation. For the next three days his temperature did not exceed 104·4° and was readily brought down to between 100° and 102° by cold sponging. At 2 P.M. on the eighth day it registered 103·6°, and at 10 P.M. it had fallen to 99·2° from which there was no subsequent rise. During those three days his pulse varied from 80 to 100, but did not exceed 104; his respiration had never been less than 50, and frequently had numbered 65. The amount of cough was so small as hardly to deserve mention, and there was no return of the red sputum; indeed, there was no expectoration of any kind. The physical signs remained indefinite, but some comparative dulness developed over the right lower lobe, and there was bronchial breathing with slight increase of vocal fremitus in this region. After the crisis was over, on the eighth day, the physical signs rapidly vanished, without expectoration or cough or pain, and with no decided crepitatio redux, till on the eleventh or twelfth day the patient was perfectly sound and only required time and care to restore his tone and re-establish his usual vigour.

In none of those five cases did a herpes develop, except in that of the lady matron, who died, and this is significant because from time immemorial the occurrence of herpes in an ordinary case of pneumonia has been looked upon as a favourable indication. The unusual features of this short history are the absence of cough, the exceeding scantiness of expectoration, the frequency of respiration, the comparative slowness of pulse, even under the pressure of high temperatures, the entire absence in the early stages of physical signs, their very imperfect development later, and their speedy disappearance without notable crepitatio redux after the arrival of the crisis. None the less, the duration of the illness, its mode of termination, the pulse-respiratory ratio, the sudden initial high temperature, &c., are strongly characteristic of the common, everyday pneumonia. But, whatever the modifying effect of the influenza poison may have been, we are driven to ask ourselves whether it is probable, or even possible, that the local condition could be the sole cause of the grave constitutional disturbance, or whether the hyperæmia and slight hepatisation of the lung would not better fit into the theory of its being a consequential rather than an etiological incident in the history of the disease; whether, in short, such cases are not a strong argument in favour of the specificity of pneumonia. In the last edition of "Quain's Dictionary of Medicine"

Dr. T. Henry Green tersely states: "The old view that pneumonia is a simple local inflammation accompanied by a symptomatic pyrexia would appear to be no longer tenable; and although a complete pathology of the disease must await further investigations the present position of our knowledge makes it in the highest degree probable that it is a *general infective disease* closely allied to the acute specific fevers, of which the lung inflammation is the characteristic local lesion. What is known of the etiology of the disease, the absence of any constant relation between the local inflammation and the intensity of the fever, the "typical" course of the fever, the fact that the disease is incapable of being produced by mechanical or chemical injuries of the lung; and, lastly, the discovery of peculiar micro-organisms all tend to support this view of its pathology."

Influenza is widely recognised as one of the specific diseases which, in all probability, owes its existence in great measure to microbic action. The toxines secreted by its microbes are known to possess a special affinity for the nervous system. This is evidenced by the prostration, inertia, neurasthenia, hypochondriasis, and sometimes even melancholia which abide in greater or less degree as a legacy of the most ordinary attack. Pneumonia behaves in many respects like the other acute specific fevers and has been demonstrated to possess micro-organisms which are capable, when inoculated into certain animals under favourable circumstances, of setting up, if not the true disease, at least a septicæmia of which a consolidated lung is the striking characteristic. Many of the prominent features of the everyday inflamed lung depend upon interference, from whatever cause, with the normal stability of the lung nerve-supply.

In the pneumonias, such as those above related, met with as complications of influenza we have to deal with either: (1) the ordinary disease, more or less modified by the previous systemic disturbance of the influenzal attack and occurring as an accidental sequela; or (2) an entirely different disease, bearing close analogies to the classical disorder, but owning a different cause and entirely dependent for its manifestations on the pre-existence of influenza. If the former hypothesis be the true one, and it seems the more likely, then true pneumonia is capable of modifications in its symptomatology, and, assuming that the pneumococcus is a constant concomitant of the disease, whether causative or otherwise, an explanation of these anomalies may be suggested by the possible want of perfect concurrence of action of one class of microbe with another, either in the respiratory tract, where the micro-organisms of both diseases are abundantly found, or in the blood itself; or else by the counteracting influence of the one set of resulting toxines with the other, producing, both directly and reflexly, results different from those to be expected from the unfettered action of either. If, on the other hand, the latter alternative be the right description of the condition, the new pneumonia which finds its parentage in influenza bears such a close resemblance to its better-known prototype that in all probability the pathological mechanism which causes the one is very closely allied to that which is responsible for the other. Further, if the predilection of both toxæmic secretions is the nerve centres, their disturbing effect in the neighbourhood of the fourth ventricle would go far to account for all the symptoms; not only such as are recognised as normal in an ordinary pneumonia, but also those which, however different from the common type, unmistakably proclaim that the usual course of an attack of influenza has become complicated by the occurrence of an inflamed lung.

Warwick.

APPENDICITIS AND RHEUMATISM.

BY G. A. SUTHERLAND, M.D. EDIN., M.R.C.P. LOND.,
PHYSICIAN TO THE NORTH LONDON CONSUMPTION HOSPITAL AND TO OUT-PATIENTS PADDINGTON-GREEN CHILDREN'S HOSPITAL.

IN the numerous papers and monographs on the subject of appendicitis which have appeared within recent years one point does not seem to have attracted much notice—namely, the association of appendicitis with constitutional disease. By this I do not mean the occurrence of such lesions as ulceration of the appendix in typhoid fever or tuberculosis, but the question whether the tissues of the appendix can be so acted upon by a poison circulating in the blood as to become acutely or chronically inflamed. In this paper I shall refer to some points in the anatomy, physiology, and pathology of the appendix which seem to render such a view probable, and then discuss more particularly the association which I have found clinically to be most frequent—namely, that of appendicitis and rheumatism.

Special attention has been paid recently to the large amount of lymphoid or adenoid tissue which is present in the substance of the vermiform appendix. This has been noted by Mr. Bland Sutton, Dr. Kelynack, Dr. Hingston Fox, Mr. Mayo Robson, and Dr. R. J. A. Berry. Mr. Bland Sutton[1] speaks of the appendix as an abdominal tonsil, since lymphoid tissue is the chief structure in both appendix and tonsil, and there are marked similarities in the inflammatory and suppurative attacks to which these organs are subject. Dr. Berry[2] has made a careful investigation into the comparative histology of the appendix and cæcum, and has found that at the apex of the cæcum a mass of lymphoid tissue is usually present. He says: "In some classes the cæcum is composed almost entirely of lymphoid tissue, and in others these lymphoid elements are contained in an offshoot of the cæcum—the vermiform appendix. This differentiation of the lymphoid tissue into a special organ becomes more marked with the ascent in the vertebrate scale." As the liability of lymphoid tissue to inflammation is well known, these anatomical facts may throw some light on the pathology of appendicitis, and their bearing on this subject will be referred to later.

The vermiform appendix is usually regarded as a functionless organ (Treves, Talamon, Bland Sutton, &c.), but its richness in lymphoid tissue suggests at least one possible use—namely, the production of leucocytes or lymphocytes. In other parts of the alimentary canal the importance of adenoid tissue has now been fully recognised, and the action of the lymphocytes produced in it has been explained. Dr. Sims Woodhead says: "It has now been very generally accepted that passing to and from the patches of lymphoid tissue in the walls of the alimentary canal, into and out of the canal itself, are numerous leucocytes, amœboid cells, or lymphoid corpuscles, as they are sometimes called. Further, it has been demonstrated that these small cells have the power of taking up foreign particles and of digesting them, or of so transforming them that unless they consist of particles of pigment they disappear; amongst these foreign bodies may be numbered bacteria of various kinds."[3] It would naturally be expected, then, that these functions ascribed by Dr. Woodhead to the diffused lymphoid patches of the alimentary canal would characterise also the large amount of this tissue present in the appendix, and such a view is strongly supported by the results of a recent experimental research made by Dr. R. J. A. Berry.[4] He describes the function of the appendix as twofold: (1) leucocyte-producing, and (2) secretory; and as regards the leucocytes he considers that they are of use both in the destruction of micro-organisms and in the absorption of proteids. Dr. Armand Ruffer, in describing the action of the lymphocytes (or "microphages") of the lymphoid tissue in the alimentary canal in absorbing micro-organisms and foreign matter, states that "the patch near the rabbit's ileo-cæcal valve and the vermiform appendix are the structures in which these processes are most marked."[5] From the situation of the appendix at the first part of the large intestine it is manifest that these functions will be of great service. The cæcum is apt to become loaded with fæcal matter in which bacteria of all kinds flourish, and were there not some such protective power in the form of lymphocytes as described above decomposition would go on unchecked, and symptoms of auto-intoxication would probably be extremely common.

The pathology of appendicitis cannot be said to be clearly understood. By most writers the disease is regarded as a purely local one dependent on local causes. The presence of catarrh, or a concretion, or cystic dilatation, or a kink or twist of the appendix is held to be a sufficient explanation of the morbid phenomena. The list of those local causes is already a large one and is still being added to, and yet numerous cases remain in which no cause has been ascertained. Further, it is a question whether many of these so-called causes are not really the results of inflammation in the appendix and the surrounding structures. Talamon admits that in simple inflammatory attacks the essential

[1] THE LANCET, March 7th, 1891.
[2] Gunning Prize Thesis, Edinburgh, 1894, and Journal of Pathology and Bacteriology, vol. iii., No. 2, 1895.
[3] THE LANCET, Oct. 27th, 1894.
[4] Gunning Prize Thesis, Edinburgh, 1894.
[5] On the Phagocytes of the Alimentary Canal. Quarterly Journal of Microscopical Science, vol. xxx., 1889-90.

lesion is a parietal one, as has been proved by the early operations of American surgeons. He says: "The appendix becomes increased in size, and appears dilated, turgescent, and erect, being about the size of the little or index finger; its walls are thickened, and its cavity is enlarged and filled with viscid or semi-purulent mucus."[8] Such a condition, however, is by no means limited to simple inflammatory attacks. Mr. Arbuthnot Lane has described a case of acute general suppurative peritonitis secondary to appendicitis for which no local cause, such as those mentioned above, was found. He says: "The appendix was as large as one's thumb and intensely livid. After it was removed it was carefully examined, and although covered with lymph it was perfectly intact and had no smell whatever. On dividing the appendix longitudinally the muscular and mucous coats were much hypertrophied, and the whole thickness of the bowel was enormously increased by the very acute inflammatory process. There was nothing found in its interior beyond a little fluid fæces, and there was no evidence of constriction anywhere."[7] The primary change then would appear to be an acute inflammation of the tissues of the appendix, and even in the more serious cases with localised or generalised suppuration it is by no means rare to find no pathological changes save appendicular inflammation. The action of micro-organisms must, of course, be borne in mind; but this I believe to be a factor in the later, and not in the earlier, developments of appendicitis. It is opposed to all our knowledge of physiology to maintain that the healthy intestine, in whole or in part, is unable to protect itself against the micro-organisms which are normally present, and in considering the pathology of appendicitis in its earlier stages the first step is to explain the nature of the defect in the protective mechanism by reason of which micro-organisms have been able to penetrate the walls of the intestine.

As all writers admit that in many cases of appendicitis the theory of local causation does not seem to apply as far as any positive evidence exists, it seems only natural to inquire whether constitutional agencies may not be concerned in the production of such cases. Here again the analogy of the tonsil is a useful one. The protective function of the tonsils, and the circumstances under which this breaks down, have been described by Dr. Sims Woodhead, and his remarks may, I think, be equally well applied to the vermiform appendix. He says: "So long as the tonsils with their accessory lymphoid tissue forming this protective ring for the pharynx remain healthy, or so long as they are attacked by no extraordinary number of pathogenic micro-organisms, they are capable of resisting attack and of dealing with micro-organisms, even of what would be called a most virulent type. In this, of course, they are helped by the epithelium with which the lymphoid structure is invested, but some, at any rate, of the work appears to be performed by the wandering lymphoid cells of which I have spoken."[8] The tonsils may be regarded as the first line of defence in the alimentary tract; other protective agencies exist in the secretions of the stomach and intestines and in the scattered lymph follicles of the small and large gut, but from the anatomical and physiological considerations mentioned above it may not be amiss to regard the vermiform appendix as the second line of defence.

The failure of this defensive mechanism must next be considered. If an irritant poison, such as that of rheumatism, is circulating in the blood, it will manifest itself by local irritation and inflammation in certain susceptible tissues. Such a condition is present in the case of rheumatic tonsillitis, in which the inflammation attacks primarily the tonsils, and may extend thence to the pharynx, soft palate, and the deeper structures of the neck. Similarly in the case of appendicitis we may have a constitutional poison manifesting itself by an inflammation of the lymphoid tissue in the appendix, and an extension of this inflammation to the mucous membrane, the adjacent peritoneum, and the cæcum. Other pathological changes which are commonly met with—such as cystic dilatation, catarrh, concretions, &c.—will result from such inflammatory attacks. In course of time also these attacks will permanently injure the lymphoid tissue, limiting its production of lymphocytes and lessening its powers of resistance; and consequently the bacteria of the adjoining part of the intestine will increase in number and will eventually be able to penetrate the appendix and cause the more virulent and septic forms of appendicitis. While not denying the existence of purely local or mechanical causes of appendicitis, I believe that in certain cases the pathology is as sketched above—namely, (1) the presence of a constitutional poison, producing (2) inflammation of the lymphoid tissue in the appendix, which is thereby deprived of its normal protective functions, and is so weakened that there may follow (3) the entrance of micro-organisms and septic appendicitis or peritonitis.

The question as to whether any connexion exists between appendicitis and constitutional disease is one of considerable importance from a therapeutic standpoint. We have seen that anatomically and pathologically the appendix and the tonsil are very similar, and it is now recognised that an attack of tonsillitis is a common occurrence in subjects of the gouty or rheumatic diathesis. In such cases, moreover, the disease yields more readily if constitutional as well as local remedies are employed. As regards appendicitis, if it can be shown that a family history of gout or rheumatism is frequently present, and that other manifestations of gout or rheumatism are found to coexist or alternate with appendicular symptoms, it may fairly be claimed that there is at least presumptive evidence of a causal connexion between these affections and appendicitis. Such evidence I have tried to adduce in a series of cases published elsewhere.[9] The literature of the subject does not supply much information, as authors in describing cases of appendicitis have seldom given a detailed account of the family history or previous illnesses. Dr. Haig[10] thinks that nearly all cases of perityphlitis have a gouty origin and are caused by the deposition of uric acid in the fibrous tissue of the cæcum. This may be so, but, on the other hand, the tendency now is to ascribe the vast majority of all cases of perityphlitis to appendicular disease, a view which is constantly deriving additional support from the indisputable evidence presented at operations and necropsies. In this connexion I wish to refer to a case of "rheumatic perityphlitis" recorded by Dr. Burney Yeo.[11] The patient was a girl aged eighteen years who was admitted into hospital suffering from pains in the arms and knees and right iliac region, accompanied by sickness. The case is described at length, and Dr. Yeo's comment is as follows: "Extremely rare though the occurrence is, there can be no doubt that this was a case of rheumatic perityphlitis. The intercurrence of rheumatic arthritis of the joints of the right arm, the previous history of acute rheumatism, the endocarditic murmur, the complete and rapid disappearance of the local symptoms, and the sudden fall of temperature on the administration of sodium salicylate are facts which leave no room for doubting the rheumatic nature of this attack of local peritonitis." With this statement all who read the case will, I think, be in perfect agreement, but when Dr. Yeo remarks that "the case proves as clearly as possible that clinically we may have a true perityphlitis without any necessary involvement of the appendix" his position is open to criticism. He admits that to English, American, and German physicians rheumatic peritonitis is almost if not entirely unknown, and supports his own view by a reference to a list of fifteen cases collected by Spillmau and Ganzinotty.[12] These have been analysed by Mr. Treves, who considers that "the evidence upon which the pathological assumption depends is by no means satisfactory and will not stand a critical examination."[13] Further, the whole of the clinical symptoms were identical with those which are now regarded as typical of appendicitis, and at one period Dr. Yeo, "bearing in mind the predominating tendency to regard all inflammatory attacks in this region as probably connected with some suppurative affection of the appendix, discussed the advisability of calling a surgical colleague into consultation with the view of some possible operative exploration." This tendency to associate peritonitis when localised in the right iliac fossa with appendicular disease is much strengthened, as already stated, by the early operations of American surgeons in similar cases, and as Dr. Yeo is unable to disprove this etiology I venture to regard his case as one of "rheumatic appendicitis."

[8] Appendicitis and Perityphlitis. Translated by Dr. R. J. A. Berry. 1893.
Transactions of the Clinical Society, vol. xxvii., p. 104.
[9] THE LANCET, Oct. 27th, 1894.
[9] Brit. Med. Jour., vol. i. 1892, p. 857, and Edinburgh Hospital Reports, 1896, p. 349.
[10] The Practitioner, January, 1893, and Brit. Med. Jour., vol. i. 1894, p. 1413.
[11] Brit. Med. Jour., vol. i. 1894, p. 1289.
[12] Dictionnaire Encyclopédique des Sciences Médicales, tome xxiii., p. 310.
[13] Lettsomian Lectures on Peritonitis. Brit. Med. Jour., vol. i. 1894, p. 344.

Amongst the predisposing causes of appendicitis age is acknowledged to be an important factor, and as the activity of lymphoid tissue is greatest during early life its liability to inflammation in young subjects is not to be wondered at. Abdominal pain in children is frequently localised in the right iliac fossa, and it is probable that repeated slight inflammatory attacks of appendicitis may impair the function of the lymphoid tissue and predispose to the more serious forms of the disease. A similar tendency is observed in connexion with the tonsils, which are frequently found to be much enlarged and indurated, and yet the preceding inflammatory attacks may have been so slight as almost or entirely to have escaped observation. Sir Dyce Duckworth [14] finds that cold is frequently the immediate cause of appendicitis. Numerous cases have been recorded in which exposure or violent exercise in apparently healthy individuals was the immediate precursor of an attack. As the appendix is an extremely well protected organ as regards external influences, it seems natural to assume that in such cases, as in rheumatism generally, the illness is determined by a general chill which manifests itself locally in a susceptible organ. Talamon has observed that heavy eaters are liable to appendicitis, and to this cause he traces the frequency of the affection in England and in America. He says that an indigestible meal is often quickly followed by an attack of acute appendicitis, and this sequence of events is explained by the induction of increased intestinal movements, which drive a fæcal mass into the appendix. In fact, according to his theory there exists an unfortunate class of individuals who possess a cæcum always ready to discharge a fæcal concretion, and an appendix always ready to receive it, but unwilling to part with it. On the other hand, it may be pointed out that a tendency to rheumatism in those who live freely is well known, and an attack of gout or rheumatism frequently follows a heavy meal owing to the absorption of the noxious products of incomplete or perverted digestion. The local manifestations in such cases will vary in different individuals, but in some they would appear to take the form of appendicitis. As regards the clinical signs and symptoms of appendicitis, it is well known that these, as in the case of tonsillitis, may at first point to constitutional disturbance and that there may be nothing to direct attention to the appendix for one or two days. Thus, malaise, headache, nausea, sickness, general aching pains, pyrexia, loss of appetite and furred tongue, constipation or diarrhœa are frequently found to precede any pain or discomfort in the right iliac region, and these are suggestive of a constitutional dyscrasia as the primary disease. Dr. Kelynack [15] has recorded the case of a medical student who was suddenly seized with an acute illness of which the only definite local sign was tonsillitis, and diphtheria was suspected. On the following day abdominal symptoms appeared, and he died three days later from gangrenous appendicitis and acute suppurative peritonitis. It seems only natural to conclude that the appendix must have been weakened by some previous attacks, and the simultaneous onset of tonsillitis points to a constitutional cause. I have already referred to the occurrence of slight attacks of appendicitis in childhood, and I believe that these are much more frequent than is generally supposed. Such attacks are not considered worthy of more than domestic treatment, and just as rheumatism is ignored under the familiar name of "growing pains," so an attack of appendicitis is regarded as merely a form of "stomach-ache." The relapsing or recurrent form of appendicitis is characterised by a series of attacks repeated at irregular intervals, and tending in some cases to a condition of chronic ill-health. The relapses are extremely difficult to explain on any theory of local mechanical causation, and it is in this class of cases more especially that Talamon's theory of fæcal concretions appears to me to fail completely. On the other hand, if a constitutional disease such as rheumatism is present, and if it manifests itself by an attack of inflammation in the appendix, we shall at once recognise a liability to the recurrence of inflammation in the same organ. Such a view both coincides with our knowledge of rheumatic disease generally and explains the frequency of recurrent attacks of appendicitis.

If the above statements as to the pathology of simple appendicitis, to which I have been referring more particularly, be accepted the treatment to be adopted will be both constitutional and local. While fully admitting the frequent occurrence, even in previously simple cases, of symptoms demanding immediate surgical interference, I differ entirely from those who hold that all cases of appendicitis ought to be regarded as surgical from the outset. Such an opinion seems to exist in America, and one of the most recent writers on the subject, Dr. G. R. Fowler,[16] says that "the less medical treatment which cases of appendicitis receive the better." In this country, however, such extreme views have not yet been generally accepted. Mr. Treves, who has shown the value of operative treatment in suitable cases of relapsing typhlitis, states that "the cases adapted for operation are comparatively few, and the simplicity of the surgical treatment has rather cast into the shade the somewhat neglected measures of the physician."[17] In an attack of acute appendicitis in a rheumatic patient the symptoms will often subside rapidly on the administration of full doses of salicylic acid or its compounds. It is also advisable to clear out the bowels by means of two or three grains of calomel, followed by a Seidlitz powder, and to keep up this action by repeated doses of some mild saline. By this means we are able to prevent the accumulation of putrefactive products in the cæcum and the consequent risk of septic absorption. Even if diarrhœa is present from the outset, as occasionally happens, it is no contra-indication to the use of mild salines, for the diarrhœa is often caused and maintained by the presence of some irritant in the intestine, and the sooner this is removed and the accompanying putrefactive changes checked the better. Opium tends to conceal the symptoms, but if the local pain be excessive a fomentation containing opium and belladonna may be applied over the right iliac region. Rest in bed, warmth, low diet, and the use of local antiphlogistics represent the other details of treatment which are generally approved of. In the relapsing or more chronic forms of rheumatic appendicitis the life of the patient must be ordered and supervised as in rheumatism generally. Special attention must be paid to the condition of the bowels so as to prevent any accumulation. Some medicine, such as cascara sagrada, is to be taken regularly, and with this may be combined naphthalin (Watson Cheyne), or salol (Treves), or creasote as an intestinal antiseptic. The prolonged use of small doses of salicylate of soda will be found useful in preventing a repetition of the attacks.

Old Cavendish-street, W.

[14] Brit. Med. Jour., vol. i. 1892, p. 386.
[15] The Pathology of the Vermiform Appendix, 1893.
[16] A Treatise on Appendicitis, 1894.
[17] Brit. Med. Jour., vol. i. 1895, p. 517.

A FATAL CASE OF JAUNDICE WITH CEREBRAL SYMPTOMS.

BY SIDNEY H. SNELL, M.D. LOND.,
LATE HOUSE PHYSICIAN, HOUSE SURGEON, &C., UNIVERSITY COLLEGE HOSPITAL, LONDON.

WITH A REPORT ON

THE MICROSCOPICAL APPEARANCES OF THE LIVER.

BY THE LATE F. V. BUNCH, F.R.C.S. ENG.,
FORMERLY SURGICAL REGISTRAR, UNIVERSITY COLLEGE HOSPITAL.

THE patient was a woman aged twenty years. She had two months previously consulted me for amenorrhœa, which I found to be due to a three and a half months pregnancy. There was a marked phthisical family history, her mother having died from that disease, and since the patient's death her father and a sister have also succumbed to phthisis. In addition, at the apex of the patient's right lung there were signs of some old fibroid trouble. The onset of the present attack was as follows. On Nov. 18th, 1893, the patient seemed to be in her ordinary health and went to London to be married, she being then five and a half months pregnant. She remained at her mother-in-law's house till Nov. 20th, when she returned home feeling a little unwell and complaining of indigestion. This feeling continued, and on Nov. 23rd her friends observed that she became slightly jaundiced, vomited occasionally, and refused all food. I saw her first on Nov. 25th in the evening and found her very deeply jaundiced and complaining of severe pain in the right side and general depression. Her manner was a little strange, but she was perfectly sensible; her breathing was rapid (30), the pulse 70, and the temperature 99° F. On examination there was great tenderness over the hepatic area

corresponding with the site of the pain, and marked diminution in the superficial dulness of this area was manifest on percussion. The edge of the liver could not be felt. Splenic dulness was well marked. Nothing abnormal could be detected elsewhere by physical examination, save the old patch of tubercle before alluded to at the apex of the right lung. The fœtal heart was distinctly audible. The urine was dark in colour and contained bile pigment in abundance and a trace of albumin. On evaporation to one-fourth of its bulk and the addition of nitric acid no crystals of urea nitrite were obtained, showing the loss of urea. Repeated evaporations and microscopical examinations of different samples failed at any time to detect the least trace of crystals of either leucin or tyrosin. Owing to pressure of practice, distance from town, &c., a more complete analysis of the urine was not possible. On Nov. 26th the patient was clear and sensible, although she had had some delirium during the night. An expression of intense anxiety pervaded the features; the breathing had increased in rapidity (37), the tongue was brown and dry, the temperature was 100°, and the pulse 82. Early in the morning the patient had vomited a large quantity of altered blood having the appearance of coffee grounds. The bowels had acted twice, the motions being clay coloured. She altered little during that day, but complained of headache and persistently refused nourishment. Towards night mild delirium again came on. On Nov. 27th, at 2 A.M., the patient suddenly became totally blind, retaining only the perception of strong direct light. Later in the morning the delirium passed off and the patient again became quite rational, but complained strongly of the pain over the hepatic region. At this stage her pupils were contracted to pin point-size. The superficial liver dulness, steadily lessening, had by that time entirely disappeared. On the evening of the same day delirium of a much more violent type appeared, and her temperature, taken in the axilla, was 101°, the respiration 38, and the pulse 140. During that night convulsions supervened, and the jaundice, which had improved a little, became very much deeper. On the following morning (Nov. 28th) the patient became quite comatose, with now and then an occasional convulsion. The pupils had become, with the onset of the coma, widely dilated. The patient died early on Nov. 29th, just ten days after the first feelings of malaise and only seven days after the first appearance of jaundice. There were throughout no ascites and no hæmorrhages under the skin, nor was any itchiness complained of.

With the greatest difficulty I obtained permission for a partial necropsy. On exposing the liver I found it to be much smaller than natural and to be shrunk away towards the back, this accounting for the loss of superficial dulness. It weighed, as nearly as I could guess, about thirty ounces—under two pounds certainly—and was quite firm. The gall-bladder was empty. On the surface numerous yellow patches could be seen on the red ground, and on section the organ was dark-red, mottled with yellow. The spleen was enlarged and congested. A few pieces from different parts of the liver were secured, and beyond noticing the absence of peritonitis and fluid in the abdomen &c. I had to make a hurried conclusion owing to the objections of the family. The late Mr. F. V. Bunch—whose recent lamentable death from diphtheria, contracted in the discharge of his duties as surgical registrar to University College Hospital, is to be deplored—made the following report on the microscopical appearances of the liver:—

"Pieces of liver were handed to me hardened in alcohol. The capsule was not thickened; it stripped easily, leaving a slightly granular surface. On the greater part of the cut surface the lobular arrangement of the liver substance was clearly seen; over a few scattered areas it was, however, lost. Sections were cut by the paraffin method and stained on the slides, some with Ehrlich's hæmatoxylin, others with gentian violet and eosin. The sections show much connective tissue arranged for the most part in a perilobular manner, and to a less extent in the centres of the lobules and between the columns of liver cells. Different parts show very varying amounts of connective tissue. Where the change is most advanced there are large tracts in which liver substance is only represented by a few islands of hepatic cells, many of which contain droplets of fat. Granular masses of pigment are also seen. Numerous branching ducts lined with cubical epithelium are present. Where the process is least advanced the liver lobules are large. The centres of the lobules are occupied by a loose-meshed reticulum of connective tissue in which a few liver cells undergoing fatty degeneration are enclosed; the change becomes less marked in the zone surrounding this; and in the greater part of the lobule the liver cells are quite healthy. Ducts are plentiful in the perilobular areas. The connective tissue everywhere takes the form of a loose meshwork richly supplied with oval and spindle-shaped nuclei. There is, in places, a considerable infiltration with small round cells. There are no hæmorrhages, and crystals of leucin and tyrosin are not seen. The vessels are healthy. Many examples of division are seen in the nuclei of the liver cells. The appearances of the liver differ from those described in ordinary cases of acute yellow atrophy in the formation of connective tissue; the degeneration of the liver cells is only seen where this connective tissue is formed, and there is therefore a large number of cells showing no deviation from the normal. The probable pathological process seems to have been an acute formation of fibrous tissue, the destruction of liver substance being secondary."

It will be noticed that this fatal case of jaundice with cerebral symptoms occurred in an unmarried pregnant girl; that is the class of patient attacked in so large a proportion of the cases of that rare disease, acute yellow atrophy of the liver. But although during its clinical course I had but little doubt that such was its nature, on reviewing all its aspects, and especially on studying the microscopic appearance of the diseased organ, it becomes at once evident that striking points of difference exist which mark it out from the usual run of cases of acute yellow atrophy of the liver. Thus the course was much more rapid, there was complete absence of leucin and tyrosin from the urine or from the liver sections, and there was no tendency to hæmorrhages (apart from the hæmatemesis) and no sign of abortion. The sudden onset of amaurosis I have failed to find elsewhere recorded. Again, pathologically, the liver, instead of being very flaccid, was actually firmer than natural. Microscopically, the appearances were suggestive of an acute cirrhosis rather than an acute atrophy. I knew the patient's family well, and I made very careful inquiries about her former habits, being specially incited thereto by the warning which Dr. Poore gives in his eloquent lectures on forensic medicine to always be on the *qui vive* for phosphorus poisoning in cases of acute yellow atrophy. Accordingly, at my very first visit, having managed to send all her friends out of the room, I asked the girl whether she had been taking anything to tamper with herself &c. To this question she gave a most emphatic denial and with every appearance of truthfulness. Inquiries from the friends elicited that although owing to her pregnant condition she underwent a great deal of mental worry, yet before the visit to London she became very cheerful at the prospect of being married, and, indeed, this event removed the very reason for any question of tampering. One fact was obtained which might have some bearing on the case—i.e., that the patient was in the habit of eating very large quantities (three or four pennyworth daily) of those small pink cachous used for clearing the breath of smell. I endeavoured to obtain some of these from the same source, but failed. On consulting chemists and sweet manufacturers, however, I am told that it is to the last degree improbable that these would contain phosphorus. I think it may fairly be said that the presence of phosphorus poisoning in this case is, at all events, "not proven." With regard to the question of alcoholic excitation, this in its turn may be also excluded. The patient was one of a teetotal family, belonged to a temperance society, and had never tasted alcohol in her life, according to her statement.

The case is obviously one to be recorded while waiting for further similar cases to throw a light on its exact nature. It is, of course, a matter for regret that the necropsy was so slightly and hurriedly performed; but I encountered the most strenuous opposition from the family.

Grays, Essex.

AN EXTRAORDINARY STORY OF WHOLESALE POISONING.—A story has reached us from Heath Town of wholesale poisoning by soup which in some of its particulars reminds us strongly of the Wylde Green cases which occurred during the Christmas week of last year. Nine persons, ranging in age from three to eighty-one, partook of some soup distributed in charity from the vicarage, and all afterwards showed symptoms of poisoning. In one sad case death ensued.

THE IMMUNISATION OF HORSES FOR THE PREPARATION OF DIPHTHERIA ANTITOXIN.[1]

BY WILLIAM ROBERTSON, M.R.C.V.S.,
ASSISTANT, VETERINARY DEPARTMENT, BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

IT is my intention to describe to the best of my ability the method employed in the immunisation of horses for the preparation of diphtheria antitoxin, and also to describe the process of bleeding these animals when immune. I find that suitable horses of the heavy draught class can be purchased for prices varying from £3 10*s.* to £7. The animal is, in the first instance, placed in an isolation box, where it is tested with mallein (generally twice), then with tuberculin, and if the test is negative it is placed amongst the other horses. The seat of inoculation which I find most convenient is just in front of the shoulder; this part is easily accessible in the horse, and the operator is less liable to be kicked by the animal. Previously to inoculation the syringe &c. are boiled for fifteen minutes and the part washed with ether and then with a solution of carbolic acid (1 in 20). The syringe, with needle affixed and charged with toxine, is then held in the right hand and a fold of sterilised skin pinched up with the left, the needle inserted, and the piston pushed gently home. As a rule the horse stands quietly enough and seldom exhibits any symptoms of pain or uneasiness during the inoculation. In commencing the immunisation of an animal very small quantities of the toxine are used at first, the initial dose being generally 1 c.c. In the case of the first horse experimented on I used toxine mixed with Gram's solution of iodine, but this method was soon discontinued, as it was found that the solution of iodine acted as an irritant and caused local swelling slow of absorption. The local lesion following the first inoculation is, as a rule, well marked and appears in the form of a diffuse soft swelling slightly painful on pressure. This swelling reaches its greatest height in from six to seven hours after inoculation, generally persists for two or three days, and then disappears. Coexistent with the local lesion we generally get a rise in temperature. This rise reaches its maximum in from six to seven hours after inoculation—that is to say, at the same time at which the local swelling is greatest—and generally falls to normal in thirty-six hours. When the local lesion has disappeared and the temperature fallen to normal the dose of toxine is repeated, and if this produces very little local or general effect it is raised by degrees, thus: primary dose, 1 c.c.; then after a week has elapsed, 1 c.c. again; then 5 c.c.; then 10 c.c.; then 10 c.c. again; then a rise to 25 c.c., and so on. When the dose has reached 50 c.c. we give the horse this quantity three times a week for a fortnight, and if the animal stands this amount without any reaction the dose is raised to 100 c.c. three times a week for the same length of time, and then 200 c.c. at the same intervals. The period of time allowed to elapse between each inoculation varies with different animals, and we take as a guide the local swelling and the temperature, as the inoculations are discontinued until both have subsided.

The above is the outline of the method of immunising horses, but I have noticed a few facts in connexion with the above remarks which are of some interest, but which are of a somewhat disjointed nature. No two horses are alike in their power of resistance to the action of diphtheria toxine. I have had an animal under my charge which received 10 c.c. toxine, and the day after received 100 c.c., and this without producing any very marked effect; while in another case the initial dose of 1 c.c. produced a violent local and general reaction, and after an interval of a fortnight a second dose of 2 c.c. caused paralysis of the hind quarters and the animal had to be destroyed. The same toxine was used in both cases. Again, in some animals the local lesion in the neck disappears twice as fast as in others, using the same toxine in both cases. The rise in temperature following inoculation is also very variable. I have a record of a horse whose temperature during the whole process of immunisation never exceeded 103° F., and I have a record of another horse also immune who after every inoculation had a rise in temperature, in one case exceeding 105°. Amongst all the horses I have inoculated, even when the temperature was very high, I have never known one to refuse its food; but I have noticed that following on a large dose of toxine some animals have a fit of shivering and exhibit distinct rigors. In a very few cases—four out of many hundreds of inoculations—I have seen necrosis of the skin to follow inoculation. The skin over the swelling becomes brown and hard, and on falling off leaves a glazed red surface; this, however, soon heals under a boracic acid dressing. When the horse is considered to be sufficiently immune it is allowed to rest for a clear week from the last inoculation before being bled. The vein from which we bleed is the jugular vein found on the side of the animal's neck lying in what is termed the jugular furrow and separated from the skin by the panniculus carnosus, that sheet of muscular tissue stretching subcutaneously over the upper part of the horse's body. The part over the vein is first shaved and then washed thoroughly with ether and carbolic solution (1 in 20). The vein is then raised by pressure with the fingers, and with a scalpel a small incision about half an inch in length is made through the skin and panniculus carnosus.[2] On separating the edges of the wound with a pair of forceps the vein can be observed at the bottom of the incision. The cannula, after being connected to the Kitasato flask by a piece of quarter-inch rubber tubing, is taken in the right hand, the vessel is raised with the left and the tube inserted, care being taken that the stream of the vein is not interfered with. The blood then flows freely, and when the flask is sufficiently full it is replaced by an empty one as follows. The rubber tube is pinched by the fingers of the left hand and the full flask withdrawn and handed to an assistant to plug. The empty flask is now taken in the right hand, the long glass tube is placed in the end of the rubber piping, the constricting fingers are withdrawn, and the blood flows.

As regards the amount of blood which can be removed from an animal with impunity, that of course varies with size. The amount I generally take is ten litres, but I have removed as much as sixteen litres without any injurious effect to the horse; this is not to be wondered at, seeing that one-sixteenth part of the animal's body weight is blood. The reason why I do not as a rule draw off more than ten litres at a time is that if more is taken I find the last four or five litres over the tenth do not clot properly, and the serum which separates is of a pink colour. As soon as the blood is firmly clotted it is advisable to twist the flask in the hand, so as to separate the clot from the walls. When sufficient blood has been drawn off I press on the vein anterior to the cannula and withdraw the tube. I then sponge gently with carbolic solution (1 in 20) and fasten the edges of the wound with two catgut sutures. The wound is now dusted with iodoform and covered with a piece of sterilised wool dipped in collodion. I have never had any difficulty in stopping bleeding, and the wounds have always gone on satisfactorily. The veins are in no case obliterated or obstructed, and in one horse which has been bled fourteen times the vessel is just as pervious as in any other animal.

It is hardly necessary for me to state that all instruments &c. are boiled for half an hour previously to an operation. As regards methods of restraint in this operation, these of course depend upon the animal, but I have usually found horses stand quietly enough when being bled. I should like to say a few words about the flasks in which the blood is collected and the method of decanting the serum. The flasks are ordinary Q-like filtering flasks fitted with a rubber cork and two pieces of glass tubing, one of wide calibre to allow escape of air, the other of narrower dimensions, over the orifice of which is slipped the rubber tubing connected to the cannula. These flasks are sterilised for three hours on three separate occasions. When the flasks are full and the blood has been twisted on clotting they are placed in a cool cellar, and in twenty-four hours' time a large amount of serum will have separated. The branch tube of the flask is flamed in a spirit-lamp, the wool plug removed, and the serum poured off into sterilised

[1] A paper read before the Pathological Society of London on March 19th, 1895.

[2] At first the cannula was inserted directly into the vein through the skin, but afterwards it was found to be more satisfactory to make an incision.

Winchesters. The branch tube is now wiped free from serum by repeated pellets of sterile wool, and it is finally replugged. As a rule, a two-litre flask of blood yields one litre of serum, but some horses' blood does not yield anything like that amount.

Sudbury.

AN UNUSUAL CASE OF MULTIPLE HERNIA WITH HYDROCELE; STRANGULATED FEMORAL HERNIA; OPERATION; RECOVERY.

BY ETHELBERT COLLINS, L.R.C.P. LOND., M.R.C.S. ENG.

THE patient, a man aged sixty-five years, had on the right side a complete inguinal hernia and a femoral hernia, and on the left side an incomplete inguinal hernia. There was also a hydrocele of the right tunica vaginalis. According to the patient's statement both inguinal herniæ appeared about ten years previously, and were caused by lifting heavy weights; he was, however, uncertain as to the duration of the femoral hernia. The hydrocele had existed about six years, having been regularly tapped twice a year. On the morning of Jan. 4th, 1895, I was summoned to this case "as one of the man's ruptures had come down, and he was unable to get it back." When I saw him (about three hours after his rupture had come down) he presented the symptoms of a case of strangulated hernia, he had vomited several times, there was distressing hiccough, and pain in the region of the hernia nd at the umbilicus. On examination I found that the femoral hernia was strangulated; it was about the size of a large walnut, tense, hard, and there was no impulse on coughing. I was unable to reduce it. I again saw the case in the afternoon with my brother, Mr. J. B. Collins, and we agreed to operate. After the patient had been fully anæsthetised I again tried to reduce the hernia, but was unsuccessful. Having first tapped the hydrocele, which was rather in the way, as it contained twelve ounces of fluid, I proceeded to operate in the usual manner. The sac was excessively thick, and contained a small quantity of clear fluid and a knuckle of intestine; it was tightly gripped in the femoral ring. After making a few notches in Gimbernat's ligament the gut was easily returned. I then ligatured the sac with carbolised silk and removed it, closed the wound, and dressed it with sal alembroth gauze and wool. Carbolic acid was used during the operation, and all the antiseptic precautions it was possible to take in an ordinary cottage were observed. The patient made an uninterrupted recovery, no rise of temperature or any unfavourable symptom occurred, and he was able to leave his bed on the twelfth day after the operation with the wound perfectly sound. On Feb. 11th he was in good health and, wearing a suitable truss, was walking about as usual.

I quote this as being an unusual case of herniæ complicated with hydrocele. I cannot recall a case of double inguinal hernia and a femoral hernia in the same subject, leaving the hydrocele out of the question. Of course, it is not surprising that the femoral hernia should have become strangulated, as the man was wearing a double inguinal truss—which he had obtained from some quack—leaving the femoral hernia to take care of itself. Before I ventured to record this case I sought the opinion of my friend and former teacher, Mr. C. B. Lockwood, as to whether he considered it worth publishing. His large experience and original work on this subject, together with his concordance with my views, form my excuse for doing so. I may add that Mr. Lockwood suggested that the man had an abnormally long mesentery, which might account for his several herniæ, and certainly the shape of his abdomen would indicate that he has, it being flattened above and bulging below. I am indebted to my brother for his valuable assistance, to which I largely attribute the success of the operation.

Sawbridgeworth, Herts.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SUPERNUMERARY MAMMA IN A MAN.

BY W. F. ADAMS, M.R.C.S. ENG., L.R.C.P. LOND., FORMERLY HOUSE SURGEON TO KING'S COLLEGE HOSPITAL.

WHEN I was at the Kashmir Mission Hospital last summer a Hindu pundit aged about thirty-five came to me for some gastric ailment. When about to examine his abdomen I noticed a tumour above the left hip. This proved to be a fully developed mamma, as seen in the accompanying engraving, which is from a photograph taken at the time. In consistency and appearance it was exactly

like the mamma of a virgin. The nipple was small and rather flattened, but the areola was perfect. I was unable to express any milky fluid. The man told me that it had developed at the time of puberty and never gave him any annoyance. He, therefore, did not desire its removal. His proper nipples on the chest were quite normal, and I detected no trace of other abnormalities. I believe the position, though not the commonest, is not unusual for supernumerary mammæ, but its large size and the fact of its occurring in a man seem to me to make this case worthy of record.

C.M.S., Bannu, N. India.

SINGULAR COMPLICATION OF DEATH FROM DROWNING: IMPACTION OF A PIECE OF COKE IN THE LARYNX.

BY WILLIAM EVANS, M.R.C.S., L.R.C.P. LOND.

THE following case is perhaps worthy of being recorded on account of the remarkable circumstances attending it. A boat containing six persons was capsized in the river Thames, near Wandsworth Pier, on Bank Holiday (Aug. 5th), and two of the party lost their lives. The body of one of them, a man aged about twenty-one years, was recovered on Aug. 9th, and I made a post-mortem examination on the following day. Having opened the chest, I observed that the lungs were not distended and nearly overlapping the heart, as is usual in death from drowning, neither did they pit on pressure. I removed the tongue, larynx, &c. complete with the lungs, and found a piece of coke firmly impacted in the larynx, the vocal cords grasping it a little below its centre.

This was of irregular shape, flattened, and broadest in the middle, from which it tapered to each end. The extreme measurements were 1⅜ in. long, 1 in. wide, and ½ in. thick. Where encircled by the vocal cords the extreme measurements were ⅞ in. by ⅝ in. The narrow tapering end was directed downwards. The lungs were only slightly crepitant and contained little or no frothy fluid. The other signs were those of asphyxia.

Pimlico-road, S.W.

A CASE OF ACUTE YELLOW ATROPHY OF THE LIVER.

BY D. J. COLLINS, M.B., B.CH., B.A.O. R.U.I.,
SURGEON-LIEUTENANT, ARMY MEDICAL STAFF

A PRIVATE of the 4th Battalion Rifle Brigade, aged nineteen, was admitted to the Station Hospital, Devonport, on Feb. 25th, 1894, with syphilitic iritis. The orthodox treatment was adopted, and by March 25th all traces of the inflammation of the iris had disappeared, when a yellowish tinge was noticed in the skin and conjunctiva. He complained of severe headache, anorexia, and intolerance of light; there were no fever, no hepatic tenderness, and no enlargement of the liver. The patient had never been to India and had never previously suffered from any liver trouble. On March 27th the jaundice was more intense, there were considerable bilious vomiting, severe headache, clay-coloured motions, and bile-stained urine, the temperature was normal, and there was no hepatic tenderness. The area of liver dulness appeared to be diminished, and the possibility of acute yellow atrophy suggested itself. On March 28th cerebral symptoms became marked, with restlessness, delirium, and convulsive twitchings. The vomit presented a coffee-ground appearance; the pulse was quick and full, 120 to the minute; and the tongue was dry and brown. The liver area was markedly diminished, but pain and tenderness in the hepatic region were absent. On March 29th the patient was comatose, with stertorous breathing and dilated pupils; the liver dulness had quite disappeared, both in front and behind, the liver area being replaced by intestines. The temperature was 100·2° F., the pulse 136, and the respiration 40. The urine contained bile pigment, some blood, leucin, and tyrosin. The patient died at 11 A.M. on March 30th. A post-mortem examination was made on March 31st. The body was well nourished and the skin a deep yellow colour. The liver was much diminished in size, soft and flabby, and weighed only twenty-three ounces. The capsule was wrinkled and looked almost like a bag with fluid contents. The surface was of an orange colour, with patches of dark red and purple; the section was of a dark-yellow tint, in some parts bright red, and in others entirely yellow. The gall-bladder and bile-ducts were empty; the spleen was enlarged and the heart and kidneys had undergone fatty degeneration; the endocardium was stained with bile. Treatment was symptomatic. This case is interesting in its extremely acute course, only five days elapsing between its first onset and the death of the patient; and in that the liver, which was exhibited at the Plymouth Medical Society, was extremely small in size, even for this peculiar disease, weighing, as above stated, only twenty-three ounces.

AN UNUSUAL AND REMOTE SEQUELA OF OVARIOTOMY.

BY WALTER FALLA, M.R.C.S. ENG., L.R.C.P. LOND.,
SURGEON TO THE JERSEY GENERAL HOSPITAL.

A WOMAN aged fifty-two was admitted into the Jersey General Hospital on April 12th, 1894, suffering from a large ovarian cyst. On April 17th I performed the operation of ovariotomy. The cyst was unilocular and quite free from adhesions. The pedicle being rather broad, it was transfixed and tied in the usual way with a stout silk ligature and the abdominal wound closed with a few silk sutures, which were removed on the eighth day, the wound having quite healed. The highest temperature recorded was 101·6° F. on the fourth night, after which it was normal. On May 3rd the patient got up for the first time, sixteen days after the operation; she made an uninterrupted recovery and was discharged from the hospital quite well on May 17th, a month after the operation. She continued in perfect health until the end of December last, when she said she first felt pain on micturition, but did not have any medical advice for it. In April she noticed a little blood in the urine. These symptoms, the patient said, continued and gradually became worse until she consulted me on June 30th last. She then had all the symptoms of stone in the bladder, but would not submit to an examination. On July 19th she again consulted me as she was in great pain, and the following day I sounded the bladder and found a calculus approximately one and a half inches long and three-quarters of an inch broad. On July 26th, with the assistance of Mr. Bentlif and Mr. Sullivan, I performed the operation of lithotrity. The calculus was phosphatic and was easily crushed. On attempting to withdraw the lithotrite I found it impossible to do so without using undue force, but after some further crushing and manipulation I was able with more or less difficulty to withdraw the instrument, when between the blades I was astonished to find a thick silk ligature covered with a certain amount of phosphatic deposit, which easily accounted for the difficulty I had just experienced. The bladder was afterwards washed out in the usual way and all the fragments removed. The patient had no bad symptoms and in a few days was practically well. On examining the ligature carefully I found that it was undoubtedly that which had been used for tying the pedicle of the ovarian cyst.

Remarks.—It seems difficult to understand how a ligature used in tying the pedicle of an ovarian cyst could ultimately become the nucleus of a vesical calculus in a case in which there was no injury to the bladder during the operation and no difficulties whatever connected with it, the patient continuing in perfect health for about nine months afterwards. It is also remarkable how the ligature, which must have set up a certain amount of irritation and which eventually perforated the bladder, could do so without giving rise to any symptoms until it became lodged in that viscus.

St. Heliers, Jersey.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

CASE OF FRACTURE OF OS CALCIS; UNION OF FRAGMENTS IN BAD POSITIONS; RESECTION OF PORTION OF OS CALCIS; USE OF STEEL SCREW; RECOVERY; REMARKS.

(Under the care of Mr. W. ARBUTHNOT LANE.)

THIS is one of those cases which require no comment, the reasons for the performance of the operation and the operation itself being clearly given in the account. The necessity of operation for badly united fractures has not infrequently arisen in other parts of the body, but so far as we are aware this is the first time that it has been required for fracture of the os calcis. For the notes of this case we are indebted to Mr. J. T. Roberts, dresser.

A young man aged twenty-one years was admitted into Guy's Hospital under the care of Mr. Lane for injury to the left foot on Nov. 18th, 1893. The patient lost his balance while cleaning a second-floor window, and in order to try to save himself he jumped, alighting on his feet on the pavement below after falling from a height of thirty-five feet. He was immediately conveyed to the hospital, and on admission his left foot and ankle were found to be very much swollen and discoloured. When he had been anæsthetised distinct crepitus could be felt in the os calcis by fixing the posterior part of that bone with one hand and flexing and extending the foot with the other. The line of fracture, however,

could not be felt owing to the swollen condition of the foot. As there was considerable displacement of the fragments, the foot being fixed in a position of extreme abduction, Mr. Lane wished to cut down on the os calcis and to fix the fragments in their normal position by means of steel screws, but the patient would not hear of such a procedure. Consequently the foot was fixed in as good a position as possible in the ordinary way, and gradually the swelling subsided and pain disappeared. On Dec. 12th a Croft's splint was applied, and he was discharged on the following day, supporting himself on crutches. He was readmitted under the care of Mr. Lane on Feb. 5th, 1894, for pain in the sole in front of the tubercle of the os calcis, the pain being so great that he could not stand on the foot. There was a hard swelling under the heel which on incision was found to be a mass of fibrous tissue, beneath which a bursa had developed over a prominent piece of bone. This was treated as effectually as possible. The patient was again readmitted under the care of Mr. Lane on account of pain and stiffness in the left ankle-joint, especially at the point where the external malleolus impacted on the displaced os calcis. He began to use his foot about three weeks after his previous discharge; but it became very painful and stiff after doing so. Finally he was unable to use it at all and he now begged to have the foot amputated. On admission his ankle was slightly swollen and there was some thickening of the os calcis below the external malleolus. Both flexion and extension of the ankle were limited, adduction and abduction of the foot were absent, and flexion and extension of the great toe were also limited. There was considerable flattening of the arch, and the foot occupied an abnormally abducted position owing chiefly to the outward displacement of the tuberosity of the os calcis. On Aug. 24th Mr. Lane broke down all adhesions in the joint and fixed the foot in as good a position of adduction as possible. On the 29th the patient was allowed to get up after dinner, but soon after doing so his foot began to be very painful, to such a degree that he could not use it, and it remained so for some time after he returned to bed. The breaking down of the adhesions having proved ineffectual, Mr. Lane decided to refracture the os calcis and screw the pieces together in a better position, it being evident that the pain was due to the altered mechanics of the ankle-joint owing to the union of the fragments of the os calcis in a bad position. An incision was made across the sole of the foot, and the os calcis was exposed. It was then divided by a chisel and mallet, and a small wedge-shaped piece of bone removed so as to allow the posterior portion of the os calcis to be displaced inwards. An incision was now made over the posterior surface of the os calcis and a long screw introduced, by means of which the two pieces of bone were brought into firm and accurate apposition—the distal piece of the os calcis having been slightly rotated in order to adduct the foot from its previous exaggerated abducted position. The wounds were then sewn up by deep fishing-gut and superficial horse-hair sutures, and sterilised dressings and splints were applied. On Sept. 4th the deep sutures were taken out, the wound having united by primary union. On the 11th the superficial stitches were taken out, the wounds having completely healed. On the 14th a Croft's plaster-of-Paris splint was put on the patient's foot, and on the 16th he was discharged. On Jan. 15th, 1895, the patient was again seen by Mr. Lane. He had been following his ordinary vocation for the previous month, walking about or standing on ladders &c. all day from half-past six in the morning until seven o'clock in the evening. He had felt no pain or weakness in his foot during that time. Sensation was normal all over the foot, and he could walk on tip-toe and hop about on the left leg with the greatest ease.

Remarks by Mr. ARBUTHNOT LANE.—This case illustrates very well the very great advantage that a surgeon can obtain by the use of the steel screw. As far as I know I could not have retained the fragments of the os calcis in the foot in a position of adduction without the aid of this very powerful mechanism, and one has the satisfaction of knowing that by its use one has converted a patient from a condition of absolute physical incapacity into one of perfect mechanical usefulness. Of course, it would have been much wiser to have fixed the fragments in their normal relationship at the time of the accident; but, as in many other cases, I found it impossible to make the patient understand the immense advantages which operative interference offered him over any other form of treatment.

SALOP INFIRMARY.

NOTES OF A SERIES OF CASES OF DILATATION OF THE STOMACH TREATED BY SYPHONAGE AND OTHER METHODS.[1]

(Under the care of Dr. EDWARD CURETON.)

WE bring before the readers of THE LANCET a series of cases of dilatation of the stomach which have been treated in the Salop Infirmary under the care of Dr. Cureton, the cases occurring from 1890 to 1895 inclusive. He explains that the notes refer to cases of chronic dilatation, which, as is known, is mainly due to pyloric obstruction, with or without the presence of a tumour; these cases are for the most part those of dilatation from defective tone or muscular weakness, or chronic catarrh occurring in the anæmic, or from habitual over-distension from food and drink, especially the taking largely of starchy foods, as potatoes, which generate gases, or the excessive use of aerated waters or other beverages. The patients were nearly all from the country, where a vegetable diet usually prevails to a large extent. First, with regard to the diagnosis of dilatation of the stomach, clinical evidence of this condition is afforded by the vomited matter and the time when vomiting ensues, which may be several hours after food, or again after several days have elapsed, when large quantities are usually brought up, the patient being uncomfortable and distended until vomiting occurs, when usually great relief is obtained by the emptying of the stomach; the stomach appears, however, to be only partially emptied, a residuum of sour fermenting stuff remaining behind and keeping the organ, as it were, chronically septic. Then, with regard to the vomited matters, these will usually be found to be darkish brown in colour, sour smelling, and of strongly acid reaction; a thick scum forms on the top, and a brown sediment is seen at the bottom of the vessel on standing. Most of the patients complain of acidity and of the "teeth being on edge." With regard to the physical signs, these may be well marked or again nearly all absent. The chief are a want of symmetry in the abdomen as a whole, flattening of the epigastrium, and sometimes hollowness here when distended; the "stomach note" is obtained both higher and lower down than usual, and splashing sounds can often be elicited on succussion. With regard to treatment, various drugs, as we know, have been used from time to time, but the chief object of the publication of these notes is to bring under notice the great benefit which results from the use of the stomach tube in these cases. All, or nearly all, of these cases—twelve in number—have been treated by this method. The points brought out in their treatment by drugs, diet, and syphonage are as follows: 1. As to drugs alone, they only temporarily relieve acidity and stay fermentation, but the attacks of vomiting occur again after a time. The same may be said with regard to the most careful dieting in addition to medicine; but with syphonage added to these a better result, and in some cases quite a surprising state of things, may be expected, the vomiting ceasing with the use of the tube, the pain and burning sensation and distension subsiding, and a rapid increase of flesh and strength ensuing. It will probably be found that the cases which yield the best results will be those of what may be described as "simple dilatation," such as occurred in some of these cases, the patients being country folk, hard-working men for the most part, who imbibe enormous quantities of fluid during the harvests, such as cider or "small beer," who have three meals a day, eat largely of starchy foods, drink tea freely, and also consume large quantities of potatoes, all of which tend to the generation of gases, with subsequent distension of the stomach and stretching of its walls, whereupon dilatation occurs, the food remaining in the stomach and setting up decomposition. No doubt sarcinæ might have been found in most of these cases if there had been time to look for them; they were present in the only case examined for them. Another point brought out by these cases is the relief which the tube will afford where there is malignant disease of the stomach. It has seemed to Dr. Cureton that the very fact of introducing a tube into the stomach stimulated the muscular walls to contract and diminish the size of the organ, and thus has had a more or less curative influence upon the muscular coats in cases of simple atonic dilatation. With reference to the amount

[1] Recorded before the Shropshire and Mid-Wales Branch of the British Medical Association.

of fluid used this varied a good deal; the washing out generally took place just before dinner, and was continued until the fluid used came back clear. The patients on admission were all placed on a No. 2 diet, which is the ordinary house diet of most hospitals; then, as occasion required, more milk was given, as well as prepared food and fish and beef-tea, the chief changes in diet being recorded in the subjoined cases, one article being struck off as another was substituted for it. With regard to the drugs used in washing, these were bicarbonate of soda, one drachm to a pint; sulphocarbolate of soda, half a drachm to a pint; and sulphurous acid, one drachm to a pint. Plain boiled water was often used alone. The duration of the treatment varied a good deal; but most of the patients got better fairly soon, scarcely any patient remaining in hospital over six weeks, and vomiting was hardly known to occur in any case of simple dilatation after the proper use of the tube. Another point of importance is the rapid tolerance of the treatment, and when the patient has learnt how to pass the tube for himself—that is, to swallow it—he is able and willing to follow up the treatment for himself after leaving the hospital; and when the patients are in hospital it is possible by the daily examination of the washings to judge how they are progressing. Nothing new or original is claimed for the treatment; it is only the adoption of a well-recognised form of giving more or less permanent relief to what, under other methods of treatment, are found to be chronic and unsatisfactory cases in daily practice. The following are short notes of the cases treated at the Salop Infirmary.

CASE 1.—The patient, a woman aged thirty-one, was treated in the infirmary from Dec. 20th, 1890, to Jan. 10th, 1891 (five weeks). She was placed on diet No. 2, and on Dec. 16th on extra milk. She had been an in-patient twelve months previously with similar symptoms, and an out-patient for the twelve months prior to admission. There were constant pain (epigastric) and vomiting. The stomach was markedly dilated. Treatment: creasote (1 min.) in pills three times daily, arsenic and liq. pept., and soda and rheum. The stomach was washed out by a funnel syphon with marked benefit. The patient was unable to remain under treatment and was lost sight of.

CASE 2.—The patient, a man aged twenty-three, was in the infirmary from July 23rd to Sept. 5th, 1891 (five weeks). He was placed on diet No. 2 and on prepared food (three pints). He was also given bread-and-milk, custard, fish, and cocoa. There was a history of gastric ulcer (pain, hæmatemesis, &c.) three months prior to admission. There were pain and vomiting with considerable dilatation and marked constipation. Treatment: 1. Sulphocarbolate of sodium, subnitrate of bismuth, and decoction of aloes. The stomach was washed out with warm sulphurous acid solution. 2. Hydrochloric acid, liquor strychniæ, and liquor arsenii hyd. three times daily p.c. 3. Bicarbonate of potash, salicylate of sodium (15 gr.), decoction of cinchona, liq. pept., arsen. hyd., and carbolic acid. He was very much relieved and went out with the tube, which he continued to use.

CASE 3.—The patient, a man aged forty-nine, was in the infirmary from Nov. 7th, 1891, to Jan. 2nd, 1892 (seven weeks). He was placed on No. 2 diet, with extra beef-tea, cocoa, and mince, followed by No. 3 diet and prepared food (one pint). There were pain and vomiting eight weeks prior to admission, with hæmatemesis; also similar symptoms three weeks prior to admission, vomiting constantly small quantities of sour matter about half an hour after food. He had also mitral regurgitation. His weight was on Nov. 23rd, 9 st. 2½ lb.; on the 26th, 9 st. 1 lb.; on Dec. 5th, 9 st. 3 lb.; on the 14th, 9 st. 4½ lb.; and on the 21st, 9 st. 6½ lb. The symptoms continued, but not hæmatemesis. The vomit was highly fermented. There was hepatic tenderness—? pyloric tumour. Treatment: (1) subnitrate of bismuth (15 gr.), hydrochloric acid (2 min.), and tincture of opium (5 min.); (2) carbonate of bismuth, bicarbonate of sodium, compound tincture of gentian, creasote (1 min.), acetate of morphia (¼ gr.), extract of aloes—a sufficient quantity to be taken three times daily; (3) opium pill; (4) alkaline gentian mixture; (5) liquor morphiæ (10 min.), liquor pept. (half a drachm), compound tincture of cardamom (half a drachm). The stomach was washed out as above. The patient left much relieved. Carcinoma of the pylorus was suspected.

CASE 4.—This case was that of a patient aged fifty who was readmitted and stayed in the infirmary from March 25th to June 3rd, 1893. There are no notes of any value in this case.

CASE 5.—The patient, a woman aged thirty, was at the infirmary from June 10th to July 16th, 1892. She was placed on a milk diet (two pints), beef-tea (one pint), prepared food (two pints), bread-and-butter, and fish. She had been an in-patient six times before. She had been in bed since January with gastric symptoms. There seemed to be blood in the vomit. There were many carious teeth. She was very hysterical. The stomach was dilated, and there was constipation. Treatment: (1) compound rhubarb pills, compound pills of asafœtida; (2) bromide of potassium, tincture of valerian vol. The stomach was washed out with marked relief of all symptoms, but the patient would not continue the treatment.

CASE 6.—The patient, a man aged fifty-five, was at the infirmary from Aug. 27th to Oct. 1st, 1892 (one month). He was placed on diet No. 1, and later on diet No. 2, with mince and boiled milk (four pints). There was a two months' history of vomiting and pain. A small pyloric tumour was to be felt. He vomited copiously every two or three days, the vomited matter being very acid. The vomiting ceased under treatment and only occurred once since his admission. Treatment: (1) sulphite of sodium (15 gr.), compound infusion of gentian, to be taken three times daily; (2) sulphocarbolate of sodium (15 gr.), water one ounce, for washing out the stomach; (3) liquor Fowleri (2 min.), spirit of chloroform, bicarbonate of sodium, tincture of nux vomica, infusion of gentian; (4) compound pills of pepsine. The patient was very much relieved and was discharged with the tube and solution in order to continue the treatment.

CASE 7.—The patient, a man aged thirty-eight, was at the infirmary from Sept. 17th to Oct. 8th, 1892 (three weeks). He was placed on diet No. 3. Since March he had suffered from influenza; there were vomiting and pain, with marked gastric dilatation and constipation. Treatment: (1) bicarbonate of sodium, tincture of nux vomica, rhubarb powder, compound spirit of ammonia; (2) carbolic acid (1 min.) twice daily; (3) Carlsbad Sprudelsalz (2 dr.) every morning. The stomach was washed out daily with hot water. The patient was markedly relieved and was discharged with the tube.

CASE 8.—The patient, a youth aged nineteen, was at the infirmary from July 29th to Aug. 12th, 1893 (fourteen days). He was placed on diet No. 3. There had been subacute rheumatism for five months. The heart sounds were normal. The stomach was much dilated, but there was no vomiting. Treatment: (1) salicylate of soda (10 gr.) three times daily; (2) a pill of colocynth and hyoscyamus every other morning; (3) stomachic mixture. The stomach was washed out occasionally, and the dilatation was relieved.

CASE 9.—The patient, a man aged forty-seven, was at the infirmary from Feb. 24th to March 24th, 1894 (one month). He was placed on diet No. 2, with minced chop. His weight on admission was 8 st. 13 lb., and on March 22nd 9 st. 1½ lb. For four months there were pain and vomiting daily. He vomited "dark stuff" after food. Dilatation was marked. Treatment: (1) carbonate of bismuth, sedative solution of opium, alkaline gentian mixture; (2) wood charcoal powder (1 dr.); (3) Fowler's solution, tincture of capsicum, tincture of nux vomica. The stomach was washed out daily. The patient was discharged very much relieved. He was seen six months later, when he was still washing the stomach once a week.

CASE 10.—The patient, a man aged forty-five, was at the infirmary from July 21st to Aug. 18th, 1894. He was placed on diet No. 2, with the addition of fish, minced chop, and milk. He had been an out-patient since Aug. 12th and ailing for twelve months. There were gastric pain and vomiting. He vomited only once daily. Liver dulness was diminished. Pyloric resistance was felt (under chloroform). Treatment: (1) alkaline gentian mixture; (2) creasote pills (1 min.) four times daily. The stomach was washed out daily with bicarbonate of soda. The patient obtained great relief, and was discharged with the tube, being ordered to continue this treatment. He is supposed to have died subsequently from pyloric cancer.

CASE 11.—The patient, a man aged twenty-six, was at the infirmary from Jan. 5th to March 2nd, 1895. He was placed on diet No. 2. There was a three years' history of pain after food. Two months previously there was "black" vomit. He had lost 2 st. Treatment: (1) compound gentian mixture; (2) pill of colocynth every other night; (3) creasote pills (1 min.) p.c. The stomach was washed out with sulphocarbolate of sodium (20 gr. to the pint of water). The patient was very much relieved and was ordered to continue the syphonage.

CASE 12.—The patient, a man aged thirty-two, was at the infirmary from March 30th to May 4th, 1895. He was placed on diet No. 2, with milk. There was a history of about six months' pain and vomiting, with wasting and anæmia. He vomited a pint or more at a time, usually in attacks lasting from two to three days and occurring about every fourteen days. Treatment: alkaline gentian mixture with nux vomica; syphonage with bicarbonate of soda. The patient obtained great relief and is continuing the treatment.

Remark by Dr. CURETON.—My thanks are due to the present house surgeon of the infirmary, Mr. Godson, and to his predecessor, Mr. MacLeod, for their kind help in collecting the notes of the above cases for my use.

Reviews and Notices of Books.

Essays in Heart and Lung Disease. By ARTHUR FOXWELL, M.A., M.D. Cantab., F.R.C.P., Physician to the Queen's Hospital, Birmingham. London: Charles Griffin and Co. 1895.

IN this volume the author has collected and revised some of the papers that he has, during the past decade, contributed to medical societies or to journals. They are obviously the outcome of much thought, and they deal with topics of high interest and importance to the clinical observer. The opening paper on Dyspnœa, for example, presents in clear and forcible language the varieties of this symptom of respiratory and cardiac disease comprising a discussion of the causation of the asthmatic paroxysm. The subject is illustrated by descriptions of cases in the experience of the author and the discussion of treatment. In the next paper, on the Expectoration in Phthisis—the term is here used to cover all forms of destructive lung disease—the subject is dealt with in each case under the three heads of (1) the nature of the expectoration; (2) the reasons for this nature; and (3) treatment. It is a useful systematic account of this common symptom. Under the head of "Catarrh" Dr. Foxwell opens up several novel and interesting questions. He is convinced of the utility of including under this head many local inflammatory affections other than those of the mucous membranes, and his arguments are worthy of all attention; but he further regards acute pneumonia and acute (primary) peritonitis as examples of "constitutional" diseases allied to the same group. He draws a striking contrast between the type of acute pneumonia in children as seen by him at Manchester and that seen at Birmingham, a kind of comparison which we do not remember to have been made before. Nor does it appear as if the difference is to be explained by regarding the one group as conforming more to the type of lobar pneumonia, and the other to that of lobular. In his essay on "catarrhus" he reviews the grounds upon which he has been brought to the conviction that these pyrexial disorders in which one or more organ or tissue of the body may be affected are in all probability due to the intervention of a microbe—perhaps the pneumococcus—and it is impossible to adopt this view without being reminded of influenza and its multifarious sequelæ. It seems only logical to take this step, and to refer all inflammatory states which are attributed to chill or to climatic and seasonal changes—to the operation of specific infection upon the predisposed organism. Indeed, if inflammation itself is only evoked by the intervention of microbes, then there is no escape from some such conclusion as that drawn by Dr. Foxwell from other data. How strange it is that teaching, which in one generation would appear to be fanciful and far-fetched, comes in the next generation to be regarded as the most rational and appropriate. It does, indeed, appear, without ignoring the admitted power of chill and exposure as leading factors in the etiology of catarrhal affections as if they should no longer be regarded as the essential elements in their production. The volume includes three papers on climate, particularly of Davos, Arosa, and St. Moritz, which prove that the author made good use of his sojourn there, for he furnishes much information that is of value to those who have to advise pulmonary invalids as to their winter resort. Papers on the Condition of the Vascular System in Anæmic Debility and on Arterial High Tension are amongst the most interesting of these essays, which also deal with such subjects as Hæmoptysis, the Curability of Phthisis, and Non-tuberculous Cavities, the whole forming a volume that contains much that is reasonable and suggestive.

Edinburgh Hospital Reports. Published under the Editorial Committee of the Royal Infirmary, Royal Hospital for Sick Children, and Royal Maternity and Simpson Memorial Hospital. Edited by G. A. GIBSON, M.D., D.Sc.; C. W. CATHCART, M.A., M.B.; JOHN THOMSON, M.D.; and D. BERRY HART, M.D. Edinburgh and London: Young J. Pentland. 1895.

THIS volume is No. 3 of the series of reports consisting of, besides statistical tables drawn up by the registrar, papers and observations upon various medical and surgical subjects, the texts for which are furnished in the main by cases that have been admitted to the various institutions named on the title-page. Besides what we may call the purely professional and scientific papers there is an account of the new Craig House of the Royal Edinburgh Asylum, by Dr. T. S. Clouston; of the Deaconess Hospital, Edinburgh, by Dr. Gibson; and of the Victoria Dispensary for Consumption and Diseases of the Chest, by Dr. R. W. Philip. Altogether there are forty-two papers, but we have only space to mention a few of them. Dr. Wyllie contributes a long and interesting paper on Gastric Flatulence, dividing it into "true" and "false," according to whether the gas is produced in the stomach by fermentation or introduced from without, as in the case of patients who swallow air. In the former class of cases marsh gas and other carburetted hydrogens are sometimes formed, and Dr. Wyllie quotes an instance of a farm bailiff who happened to eructate at the moment he was lighting his pipe, when the gas caught fire, with a slight explosion. It is possible that cases like this may have been the foundation of the many stories of spontaneous combustion. The habit of air gulping, Dr. Wyllie says, is usually hysterical, though it may be a sign of obstruction somewhere in the alimentary tract. Dr. Byrom Bramwell gives details of twenty-three cases of myxœdema and five cases of sporadic cretinism treated by thyroid feeding, with most successful results. Photographs are given of the condition of patients before and after treatment. Dr. L. Bruce publishes an extended version of the papers contributed to our columns last year[1] on the value of thyroid feeding in some forms of insanity, and Dr. J. Macpherson has collected a number of instances where surgical interference was employed in cases of non-traumatic insanity. Headache, &c., were relieved, but there was not any very marked improvement in the mental condition. Dr. Gibson and Dr. Fleming have an interesting paper upon Characteristic Modes of Fatal Termination in Multiple Neuritis, and among the wealth of other papers we may mention that of Dr. Miles on Skin Grafting from the Lower Animals; Dr. W. Elder's Note on Aphasia; and Professor Annandale's Practical Hints upon the Operative Treatment of Cancer of the Lip, Face, Mouth, and Throat. Professor Chiene continues from Vol. II. his valuable Practical Observations in Surgery. Dr. Affleck writes on a Case of Beri-beri and Dr. A. Morison on the Blood Pressure in Angina Pectoris. A word of praise must be given to the printer and publisher for the excellent way in which the volume is got up.

[1] THE LANCET, Oct. 13th, 1894.

Mentally Deficient Children: their Treatment and Training. By G. E. SHUTTLEWORTH, B.A., M.D. H. K. Lewis. London. 1895.

IN this useful and practical manual the author sets forth, as the result of the experience gained during a period of twenty-five years' residence at Earlswood Asylum and the Royal Albert Asylum, Lancaster, the salient peculiarities of the class of imbeciles and the ameliorative measures found most useful.

The pathology of the subject is only touched on to supply practical hints to the medical man when consulted in the case of a mentally feeble or deficient child. Chapter I. contains a historical retrospect referring to the work of Séguin in France, Saegert in Berlin, and Guggenbühl in Switzerland simultaneously. A comparison is made between the accommodation provided for mentally defective children in other countries, especially in the United States, and that found in this country, the total provision here being at most for 2700 cases, while in the United States 6315 children are accommodated. Comparatively poor countries, like Denmark and Norway, appear to do much more for mentally defective children than we do in this country. Chapter II. refers to those less definite cases of mental infirmity which in later years have been described under the specific designation of "feeble-minded." The result of Dr. Warner's investigation into abnormalities in school children are given, and notice is taken of the establishment under the London School Board of "schools for special instruction" of children who cannot be properly taught by ordinary methods, "occupations" forming an important part of each day's work. In Chapter III. is given the pathological classification of forms of mental deficiency, the author grouping them as congenital, non-congenital, and developmental. There are good plates giving illustrations of cranial contours, pathological conditions, and types of idiocy. Chapter IV. is concerned with etiology, diagnosis, and prognosis of the different varieties. "Idiocy," "imbecility," and "mental feebleness" are shown to be merely grades of mental defect, and the occasional association of moral weakness with the latter is pointed out. In Chapter V. treatment is considered under the headings: (*a*) General, (*b*) Medical, and (*c*) Surgical. A plate shows crétin children before and after treatment with thyroid extract. The author is opposed to craniectomy for microcephalus, though in favour of cranial operations when mental deficiency is associated with traumatism, epilepsy, and paralysis. In Chapter VI. the important subject of Educational Training is considered under the heads: (*a*) Physical, and (*b*) Mental, the dictum of Séguin, "the physiological education of the senses must precede the psychical education of the mind," being insisted on; and the author points out the special methods of instruction needed for those who cannot "properly be taught in the ordinary standards or by ordinary methods." Illustrations are given of the simple apparatus used in training the senses. Chapter VII. treats of Industrial Training and Recreation. In Chapter VIII. the author urges the importance of moral training, and gives instances of the difficulty of dealing with moral imbeciles who have, perhaps, little intellectual deficiency. In Chapter IX. Results and Conclusions are given, the author quoting Dr. Fernald to the following effect: "It is safe to say that over 50 per cent. of the adults of the higher grade who have been under training from childhood are capable, under intelligent supervision, of doing a sufficient amount of work to pay for the actual cost of their support whether in an institution or at home." The author closes the chapter by repeating his views as to the need for further provision both for idiots and the "mentally feeble."

A copious bibliography is given in the Appendix, and very useful lists of school books, appliances, and speaking exercises suitable for special instruction of mentally-deficient children. In Appendix D is given a list of training institutions in Great Britain and Ireland for this class of patients.

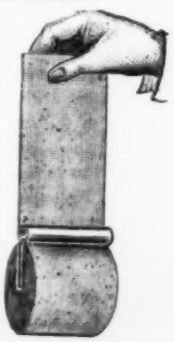
LIBRARY TABLE.

A Guide to Hindustani specially designed for the use of Officers and Men serving in India, including Colloquial Phrases in Persian and Roman Character, and a Collection of Arzis, with Transliteration in Roman-Urdu and English Translations. By G. S. A. RANKING, B.A., M.D.Cantab., Surgeon-Lieutenant-Colonel, Indian Medical Service, &c. Calcutta: Thacker, Spink, and Co.; and 87, Newgate-street, London. 1895.—The nature of this work is set forth in its title, and we may add that it is what it pretends to be—viz., a really excellent book for acquiring a knowledge of the subject such as has not hitherto been available within the compass of a single volume. This is the third edition, and its author has added much that he had, for the sake of brevity, omitted in the former editions. It gives a concise and reliable grammar of Urdu, with a capital selection of military and medical phrases, translations of manuscript exercises, and passages for translation. It seems to us to be just the sort of book required for those for whom it has been specially designed.

A Medical and Surgical Help for Shipmasters and Officers in the Merchant Navy, including First Aid to the Wounded. By WM. JOHNSON SMITH, F.R.C.S., Principal Medical Officer, Seamen's Hospital, Greenwich. London: Chas. Griffin and Co., Limited, Exeter-street, Strand. 1895.—It is not by any means an easy task to write and compile a book on this subject which shall be sufficiently comprehensive, and at the same time sufficiently clear and practical as to be really useful to those for whom it is designed: but we think Mr. Johnson Smith may be congratulated on having accomplished his purpose. We have applied to this book the test of looking through it generally and of specially referring to several portions of the volume treating of various subjects with a very satisfactory result. The work is illustrated with coloured plates and numerous engravings, and the instructions given—whether in relation to the treatment of disease and injury occurring on shipboard under circumstances where specially skilled assistance is not available, or in dealing with the prevention of disease and the feeding and nursing of individuals suffering from infectious fevers and internal affections—strike us as sound and judicious, and really helpful under the circumstances. The author, in order to make his treatise as complete and useful as possible, has availed himself of all the latest information, and also of the suggestions of the medical officer of health for the Port of London and others, and has added a chapter on cooking on shipboard for healthy men and invalids, specially prepared for the work by the instructor in nautical cookery to the Wells-street Sailors' Home.

New Inventions.

THE "NON-RUN-AWAY" BANDAGE.



HAVING experienced the inconvenience and loss of time occasioned by a bandage falling from the hand and unwinding, I have suggested to Messrs. Reynolds and Branson of Leeds a simple plan for holding the same. The illustration will explain the idea, which will, I trust, be found in practice to supply a want long felt by house surgeons and hospital dressers. Should only a part of a six-yard bandage be employed for a dressing, the remainder will be left securely rolled for future use.

ALEX. DUKE, F.R.C.P.Irel.

Cheltenham.

THE LANCET.

LONDON: SATURDAY, AUGUST 24, 1895.

THERE are some broad principles to be remembered in considering the best way of meeting the demand for greater stringency in maintaining the ethical standards which have hitherto been supposed to govern the profession. This demand is very general, and comes very creditably from the great body of general practitioners. It is too common to speak as if errors of behaviour were confined to this section of the profession, and as if in the ranks of consulting practice there were no doubtful methods of success. We are under no such delusion. There are the same circumstances of pressure and competition and the same weaknesses of character in the one sphere of practice as in the other. Certainly, as we have said, the demand for greater stringency comes very much from the rank and file of the profession. The proceedings of the recent meeting of the British Medical Association prove this. Some great authority with strong powers to be used somewhat vigorously is demanded, that can at once protect the public against the experiments of false pretenders and unqualified practitioners and the profession from the discredit of men within its pale who lower its dignity and ignore its traditions. The long series of resolutions passed at the recent meetings has this significance.

The question is, In what body is this power of discipline to reside? and to what extent is it necessary to appeal to Parliament at all? Parliament is well known to be reluctant to undertake medical legislation, and those who have seen most of the haphazard way in which medical legislation is eventually effected will be most ready to admit that before we do appeal to Parliament we should be clear on two points—first, that the profession has done all it can do by the use of its own influence, its own immanent power, and the exercise of its present legal rights. The second point on which we should be clear is as to the exact defect in our present powers, and the form in which we should approach Parliament with a view to legislation which would supply that defect. It is not ten years since Parliament passed a great Medical Act, conceding amongst other things the principle of direct representation. It is rather early to expect a Government to reopen the subject unless a very good case is made out for so doing, not only in the interests of the profession, but in those of the public. Many of the evils from which the profession itself is now suffering—as, for example, low and unworthy methods of practice, such as demean it in the eyes of the public and are, indeed, inconsistent with the proper treatment of disease—should be met, in the first instance at least, by the action of the voluntary associations of the profession. Law should never be asked to do that which men can and ought to do for themselves. Parliament does not give privileges and protection for nothing. It is pretty sure to impose conditions which rob the concession of much of its value. Let us then do what we can for ourselves as members of a profession, liberal indeed, but yet a profession conscious of its own dignity, of its rights and its responsibilities. There are some big questions which voluntary action should settle without appeal to Parliament or even to the medical authorities. Take, for example, the questions of medical aid associations, cheap dispensaries, wholesale contempt for the sanctity of medical service. Surely medical men in local societies, as that of Cork, or in the British Medical Association, by firm and united action can make their influence felt effectively. By remonstrance, and, if need be, by excommunication, they can make the offender ashamed of himself and bring him to recognise that he has duties to his profession as well as to himself which he cannot ignore without losing caste. A very striking example of what can be done in this direction is afforded by "The Battle of the Clubs at Brussels," an account of which by our Special Commissioner will be found in our present issue. It is not to be expected that Parliament will assign penal or disciplinary duties to voluntary associations of medical men, however large or powerful. They have their own powers and their own influence, which have never yet been fully or systematically used. But there are many indications that such associations as already exist will have to use their powers for ethical and disciplinary purposes much more seriously if they are to retain the respect of their members and of the public itself, which, after all, respects the profession the more when it shows that it respects itself.

Further, in contemplating the acquisition of more stringent legal powers of discipline for the profession we must not forget that Parliament or Royal Charters have already fixed the seat of these powers in two clearly defined quarters—the medical bodies, or, as they are called in the Medical Acts, the medical authorities, and the General Medical Council. It is by no mere accident that these powers have been placed where they are. The bodies which give diplomas to candidates impose the conditions by which these diplomas are held. Amongst these conditions are character, conduct, respect for by-laws. In the sister profession of law provisions for such conditions are more stringent, yet they are not more essential than in medicine. It is proper and natural that these bodies should have any additional powers needed to give efficacy to their disciplinary functions. Above and over all these is the ethical function of the General Medical Council. But this should rarely be called into exercise—first, because it is costly and cumbrous in its action, and, secondly, because it is fit and proper that the body which has assumed the responsibility of giving qualifications to man should be the first body to remonstrate with him and, if need be, punish him if he errs from the line of professional conduct. In any amendments of the Medical Acts, therefore, the great demand of the profession should be based on the existing facts and functions of the medical bodies and the General Medical Council, and power should be given to the General Medical Council to notice errors of conduct that, short of being "infamous," may be discreditable, or disgraceful, and thus injurious to the profession and the public.

THE office of coroner is one of the most important of our English institutions, as it is one of the most ancient. Our

views on the paramount urgency of maintaining its importance, so that all inquiry into unexplained deaths shall be carried on with the dignity, thoroughness, and formality that are fitting, are so well known that we need not repeat them; but it is, we hope, apparent to all our readers that it is because (and only because) we set such a high value upon the coroner's functions that we have been in the habit of watching jealously over the administration of "crowner's quest justice" and of allowing ourselves to comment freely upon anomalies or shortcomings that from time to time are brought under our observation.

A story has reached us this week from Bradford to which it is our duty to give prominence, for the essential point of it is—if we are correctly informed—that a member of our profession has incurred an outspoken expression of dissatisfaction from a coroner's jury for recognising the value of medical services, and refusing to prostitute them to the convenience of those interested. The story is as follows:—On the Saturday before Bank Holiday the wife of a labourer residing in Bradford went to Morecambe, and returned on the following Monday very ill. She died early on the ensuing Saturday morning after being ill all the week. On the night before she died a medical man, Mr. W. J. MARSH of Bradford, was sent for. He saw her and prescribed for her; but, whatever the chances might have been in her favour had medical attendance been summoned sooner, it was then too late for effectual treatment, and the next morning she died. Mr. MARSH was then asked by the husband for a certificate of death. This he said it was impossible for him to give, as he only saw the woman on the previous day, and he did not feel prepared to certify to the cause of death. It would have seemed to us impossible to find fault with conduct of such undeniable prudence had it not been brought to our notice that, for refusing to give this certificate, a coroner's jury has formally registered its dissatisfaction with Mr. MARSH, while the coroner has made the incident a peg whereon to hang a remark that certainly was not meant to be polite, and might bear the interpretation that greed for fees was at the bottom of the refusal. At the inquest the coroner told the jury that they would not have been troubled with the case but for the refusal of the medical man to give a certificate. The jury suggested that the medical man should be present. The coroner is then reported by the *Bradford Evening Telegraph* to have said: "I will, if you wish, send for the doctor to explain, but I shall not pay him a guinea for coming. What do you say, gentlemen? Are you satisfied with the evidence, or do you wish to see a doctor?" To this the foreman of the jury is reported to have replied, "We are satisfied with the evidence, but dissatisfied with the doctor." We cannot exactly apportion the blame of these words between the foreman and the coroner. The foreman spoke them, but they seem to be a very natural outcome of the coroner's preceding speech, and we desire to join issue with them at once by saying that we are satisfied with the medical practitioner and dissatisfied with the attitude assumed towards him by the court and the jury. The medical man in attendance upon a patient is the only person who can possibly judge whether he is justified in giving a certificate of the cause of death or no, and if medical men should be frightened into giving death certificates when they are uncertain of the cause of death we need hardly point out that one of the chief safeguards against secret murder is lost to society. That is what such treatment as Mr. MARSH has experienced may quite easily bring about. To avoid trouble and to be safe from impertinence certificates might be given without proper regard for their accuracy, and the persons who will benefit by the amiable innovation are the WILLIAM PALMERS and NEILL CREAMS of the future.

No one but a medical man can say if the cause of a particular death is apparent or not. In this case the medical man elected to say that it was not apparent. This does not mean that there was necessarily anything obscure about the case, but simply that opportunities had not been forthcoming for the medical man to discover the cause. And upon the distinct lead of the coroner the jury expressed their public dissatisfaction with the medical man for exercising rightful caution—caution which, if left unexercised, would subject the medical man to the rightful censure of law and society. The words of the coroner that he would not send for the medical man, or at any rate would not pay him a guinea for attending, amount to an insinuation, if not exactly a charge, against Mr. MARSH that he withheld the certificate so as to be summoned and receive a guinea. But on this point we will quote Mr. MARSH's own words, addressed to the *Bradford Daily Telegraph* of Aug. 14th, after being assured that the coroner's words had been correctly reported: "I gave the relatives of the deceased a written statement of the very little I knew of the case, thinking that possibly it might help to satisfy the coroner that a formal inquest was unnecessary. Also, by way of anticipating any possible attempt at malicious misrepresentation, I will make a clean breast of the enormity that I told the relatives that if this statement should have the desired effect of saving them from the annoyance of an inquest, I should expect them to pay me for it out of the insurance money, but that, recognising their poverty, I would be satisfied with a modest 2*s.* 6*d.* in addition to the still more modest 1*s.* 6*d.* which they had already paid me. I appeal to the relatives whether they did not express their obligation to me for my kindness and moderation? These remarks are my answer to the coroner's oblique suggestion that I was hankering after a dirty guinea." We have nothing to add. There will be found in our correspondence columns this week an answer to a medical man who had inquired as to the amount of facility that it was his duty to give to a coroner without being summoned. His language is very plain, and amounts to this—No guinea, no opinion. Within certain limits we endorse that view. It is no duty of the medical man to give to the coroner the assistance that expert medical knowledge can generally supply in the search for the cause of death save in return for a fee. In addition to this, preliminary and casual conversation on such an important matter as the exact cause of a death requiring or seeming to require an inquest is unsafe. Whatever scientific facts or views the medical man may desire to make public should be made public upon oath. But this does not preclude the

medical man from helping the coroner should he be asked as to the lines upon which the inquiry should run; and often, when the coroner is a layman, such assistance is, as we know, highly valued. But while we recommend every courtesy and liberality to the coroner, because of the high importance of his office, we cannot but see that there are certain coroners who desire to exclude medical evidence from their courts, and who attribute to the medical witness pecuniary greed on the smallest provocation. While this is so we cannot expect medical men to do other than stand on their strict rights.

THE condition of London generally, but more especially of the East-end, in respect to water-supply is a matter of urgent importance. It has been fully demonstrated that the water-supply can only be relied upon in normal seasons. We now know that the pipes will burst and the water fail to reach a great number of houses if there is an abnormal frost; and that, in the East-end at least, there is not under actual circumstances water enough for a constant supply during an exceptional drought. What we do not know is when an exceptional frost or an exceptional drought may again occur. We cannot tell how soon we may once more have to endure all the dangerous inconvenience which has been experienced during the past winter and the present summer. Under such circumstances the water-supply as at present organised stands condemned. The only debatable question is how it can best be altered and improved. So far as the East-end is concerned, the facts are so peculiar that they suggest that the present water famine was due as much to mismanagement as to the drought. We are assured that when the constant service was reduced to three hours per day the supply in East London was equal to 30 gallons per day per head. This is a good supply. It is, in any case, better than the Birmingham supply, which is equal to 25·5 gallons; while Manchester has only 24 gallons. It seems evident that great waste must have occurred somewhere, for with a supply of 30 gallons per head per day there should be no more complaint in East London than there is in Manchester, Birmingham, and many other towns. Now we are told by the East London Water Company that the average amount of water pumped in May was 51,000,000 gallons per day, which was equal to 42 gallons per head; that the supply had begun to run short from May 27th; and that in June the constant supply was cut off during several hours of the night, with the result of an economy of 10,000,000 gallons per day. This would imply that about a fifth of the consumption takes place during the night, a suggestion which does not seem credible. These figures represent, we should imagine, waste rather than consumption. Some of this waste was undoubtedly due to the carelessness of the inhabitants, who allowed their taps to run all night, but could such carelessness account for 10,000,000 gallons? This seems doubtful. Mr. BINNIE, engineer of the London County Council, attributes the waste to the leaking condition of the pipes fractured by the hard frost of last winter. In confirmation of this theory we find that, in answer to complaints as to the dirty condition of some of the water, it was urged that the water on leaving the filtering beds was perfectly clean. Then it is said that the water must have been fouled while in the pipes; but how could such an occurrence take place if the pipes did not leak? If the leakage was sufficient for the dirt to enter when the pipes were not under pressure, water must have escaped from the pipes when they were under pressure. Thus the thirty gallons per head supplied daily probably never reached their destination, but a notable proportion was lost by leakage and wasted in the subsoil.

From the public health point of view it is first necessary to solve the question of the probable leakage of the pipes. An outcry is now raised against the constant supply system. Everyone admits that sanitarians are right when they insist that constant supply is the only really safe system. On the other hand, it is maintained that what is theoretically right has been proved, by the trouble in the East-end, to be impracticable. Such an argument, we would urge, is altogether premature, for before it can be considered of any value it must be shown that the pipes did not leak. Nor should we be inclined to give up the constant supply system even if it were conclusively established that the pipes are sound. All that could be said, is that the system was badly applied. Before abandoning the constant supply system and reverting to the oft-condemned methods of house storage, to the domestic cisterns which are so easily fouled, and in which the purest water becomes tainted, we would first seek better means for preventing waste. Taps, we are told, are left open and the water allowed to run to waste. But surely, with the exercise of a little ingenuity, some means could be devised to prevent this loss of water. To begin with, all taps should be spring taps that close automatically and can only be held open by force. It is true that where there is a handle it can be held back by a string or a wedge; in that case the tap would not be left open through carelessness, but with malice prepense. As a great proportion of these taps are in backyards and courts, they are easy to inspect, and persons guilty of such malicious waste could be prosecuted. Then there is another form of tap which has no handle that can be tied, but only a small button that must be pressed against a strong spring. It must be remembered that a danger exists in the use of spring taps on a high-pressure system. If the tap is suddenly shut a shock is communicated by the column of water which may easily split the pipes. This danger, however, can be obviated by having a pipe with a reduced bore between the tap and the main—that is, in the case of a direct supply. These and many other devices must be tried, and fully tried, before the proposal to revert to intermittent supply and dangerous domestic cisterns can be entertained.

Of course, we admit that this latter and oft-condemned system is infinitely preferable to a complete stoppage of water-supply, such as that which many inhabitants of London have just experienced. It is true that the outbreak of small-pox is not to be ascribed to this cause, but in all probability the increased prevalence of diarrhœa may be attributed to some extent to the deficient water-supply. Concerning the small-pox, we consider that the growing neglect with regard to the enforcement of vaccination is more likely to supply the correct explanation of the actual state of affairs. Fortunately, Mr. CHAPLIN and the present Government are entirely independent of all the so-called faddists. The delay in the publication of the report of the Royal Commission on

Vaccination is no excuse for neglect in the application of the Vaccination Acts. If some of the boards of guardians are remiss in the fulfilment of their duty in this respect, the present Government has power enough to so alter the law on vaccination that its application shall be entrusted to the Local Government Board. If, with the more strict enforcement of vaccination, such places as the Salvation Army shelters were brought under the Common Lodging-houses Act, the danger of a small-pox epidemic would be reduced to a minimum. These are, however, matters that stand apart from the question of water-supply, and we mention them only to show that care must be taken not to confuse two totally different issues. To return to the water famine, we repeat that many measures must be taken before any thought of abolishing the constant supply system can be entertained. First the water mains and all the pipes must be proved to be sound. Then better taps must be employed, and better surveillance exercised to prevent waste in private dwellings. Finally, the amount of water at the disposal of the water companies must—and, we understand, will—at an early date be considerably increased.

Annotations.

"Ne quid nimis."

DEATH OF DR. BRISTOWE.

IT is with much regret that we have to announce the death of Dr. John Syer Bristowe, which took place at Dixton Vicarage, Monmouth, on Tuesday, Aug. 20th. Dr. Bristowe had been for many years a prominent figure in London medical and scientific circles. He was the senior consulting physician to St. Thomas's Hospital, and had filled, among many other posts, the offices of President of the Medical Society, President of the Pathological Society, and President of the Neurological Society. He was not a voluminous writer, but his "Theory and Practice of Medicine" is a classic. He was a frequent contributor to our columns, and also wrote the articles in Reynolds' Medicine on Pyæmia and Diseases of the Intestines. He was a most admirable clinical teacher, and his memory will ever be held in high honour at St. Thomas's Hospital which he had served so faithfully for many years. The funeral takes place to-day (Saturday) at Norwood Cemetery at 1 P.M. We shall publish an extended obituary notice in an early issue.

THE OPENING ADDRESSES AT THE MEDICAL SCHOOLS.

THE time is rapidly approaching when those who contemplate entering the medical profession will have to decide, if they have not already done so, as to the school where they will receive their training. On Sept. 7th, in accordance with our usual custom, we shall publish "The Students' Number" of THE LANCET, and intending students and their parents or guardians will find full information regarding the advantages offered by the various schools as well as other matter of pressing interest to the student. Most of the metropolitan and provincial schools will open either on Oct. 1st or 2nd, while many of the Irish and Scotch schools will not commence their winter terms till some weeks later. At a large proportion of the schools the opening is characterised by an introductory address, and the names of many of the speakers will assure the quality of the addresses. At St. Thomas's Hospital Sir Edwin Arnold will address the students, and he who has so ably dealt with the work of two of the greatest physicians of the soul the world has ever seen will surely be able to stimulate his hearers to work nobly in that profession whose mission is to heal the body. At Middlesex Hospital Dr. W. Julius Mickle is to deliver the address, at St. Mary's Hospital Mr. A. P. Laurie, at Westminster Hospital Dr. Monckton Copeman, at St. George's Hospital Mr. George D. Pollock, at University College Professor J. Rose Bradford, and at Guy's Hospital Mr. George De'Ath, who will take for his subject "Our Profession, our Patients, our Public, and our Press." University College, Liverpool, and the Sheffield School of Medicine are to be congratulated on securing Mr. Hutchinson and Mr. Horsley respectively as the deliverers of the opening addresses. Professor Percy F. Frankland will take for his subject at Mason College, Birmingham, "Pasteur and his Work: the Debt of Medicine to Chemistry," and Professor F. H. Napier will address the students of St. Mungo's College, Glasgow. Professor Penberthy will deliver the introductory address at the Royal Veterinary College.

THE EXPLOITATION OF INFANCY.

THIS is a burning question in Italy. So disastrous are the results of impressing children of tender years into industrial service, that some time ago a law was passed by the Chamber of Deputies limiting the age at which boys or girls could be so employed. Severe penalties were imposed on any mill or factory owner who had engaged "hands" of either sex under twelve years. This was hailed as an immense boon to the best interests of "young Italy," but after the first enthusiasm on its enactment the law came to be quickly and systematically ignored, till the rising generation of Italians are demonstrating all too indisputably, in deteriorated physique and premature senility, that the springs of life have been drained at their source, and that persistence in this criminal breach of a wise regulation will have calamitous consequences for the future of the kingdom. Signor de Andreis, a philanthropic deputy, in a recent discourse on the subject, declared that the whole series of enactments for the protection of the child and the female against industrial employment unsuited to age or sex was in Italy so utterly set at naught that the very judges before whom a case of infringement of the law in question happened to come expressed astonishment that anyone should appeal to them for redress. The returns of the inspecting officers of the Italian army medical department speak with an eloquence all their own of the need for a stringent enforcement of the law. The augmentation of the maladies, the deformations, the stunted growth or impaired development which necessitate the rejection of the conscript has of late years become simply appalling. In the "circondario" (district) of Milan alone within the year now passing, out of 6844 youths enrolled for the levy more than 45 per cent. were found too infirm or too malformed to complete the term of military service. *Pari passu* with this physical deterioration proceeds the moral, as shown in the saddening statistics of penitentiaries, houses of correction, and prisons, all full of premature "failures or worse" in the battle of life. At the age when the budding child ought to be at school, undergoing salutary discipline, mental and bodily, he is plunged into the pernicious atmosphere of the factory or the industrial "hive," there to be initiated in all the seductions, temptations, and vices, often ending in crimes, of which these aggregations of "hands" are all too prolific. Nor is it Italy alone that suffers from this sapping of her national vitality at its source. As the International Congress for the Protection of Infancy at Bordeaux has just indicated, there is no country in Europe which has not to

revise its *modus operandi* in the upbringing of its tender youth. But Italy's grinding poverty is an exceptional feature in her case, at once aggravating the evil and complicating the machinery for remedying it. Not a day too soon, therefore, do we hear of a steadfast attempt to be made in the next session of her Parliament to secure the observance of a salutary but shamefully violated law, and to devise other measures for the extension to the children of those conditions, hygienic and educational, without which no people can "live and thrive" or play its normal part in the world.

DEATH FROM ICE-CREAMS.

IT is well known to everyone who has worked in a hospital that there are seasonal casualties and accidents as well as seasonal diseases. Thus the boiling kettle and fire accidents occur more commonly in winter, while street accidents among children at least are of more frequent occurrence in the summer owing to the children being out more. The ice-cream season, too, claims its victims, and every year one or more deaths are registered from this cause. The cream, of course, must be held blameless, for this ingredient occurs in such small proportions that we may neglect it. It is probable that the chief offenders in the formation of poisons are the eggs, and that, as in the case recently reported from Limerick,[1] eggs which are not exactly putrid, but have undergone some change, probably owing to a micro-organism, are the cause of the alarming symptoms which sometimes arise from eating these confections. At an inquest held on Aug. 14th upon a youth aged nineteen evidence was given that he used to spend as much as 5*s*. to 7*s*. 6*d*. at a time upon ice-creams and sweets, which he devoured greedily. He died from acute gastro-enteritis. The sanitary conditions under which these ice-creams are made in many instances leave much to be desired, and we must continue to advise, as we have already done,[2] an extension of the Factory Act so that private houses in which manufactures involving public interests are carried on should be duly inspected by a public official. We should be extremely sorry to eat 7*s*. 6*d*. worth of good ice-cream, and perhaps the quantity which the unfortunate youth devoured may have had something to do with his death as well as the quality.

MOUNTAINEERING IN MIDDLE AGE.

THE holiday season, though well advanced, holds out, with a promise of late summer weather, the hope of leisure and recreation rendered all the more attractive by being deferred. Suggestions where to go and what to do are not yet exhausted. Sea and land everywhere have a welcome for the tourist who comes with no other object than to seek refreshment in the house of nature. Among other proposals we select one as being to some persons particularly fascinating, and affording at the same time an occasion for medical criticism—that, namely, which advises mountain climbing as a pastime for the middle-aged. The originator of this project, whose letter on the subject our readers may have seen, is "a superannuated climber." This description of himself is important. It is on the one hand a guarantee of his experience in the task he advises, and it affords on the other an explanation of his personal fitness to accomplish it with enjoyment and benefit. The Tatry Mountains in Austro-Hungary are described by him as being under 9000 ft. in height, bathed in air of the finest purity, peopled by hospitable inhabitants who provide excellent food and quarters, and traversed by guides whose civility and other good qualities are warmly commended. Those whom nature or the incapacity due to habit or bodily condition have not disqualified may well be content to enjoy such an athletic holiday as this. It is well, however, to bear in mind the fact that middle age in itself does not constitute a qualification. The practised climber or walker may often live safely according to his custom till threescore years or after. His brother and *alter ego* of sedentary occupation must regard the claims of stiffened joints and sinews long before that period has arrived. Not a few hearts and bloodvessels, moreover, have felt the strain of life before even fifty years of it have passed. For them the steep ascent, the rapid blood-flow, and quick breathing imply rather another and serious form of overstrain than a wholesome gymnastic competition of their organs. We touched upon this subject a few weeks ago[1] and we need not, therefore, discuss it now at greater length. The question of fitness or unfitness is, in short, matter for individual decision, and we know of one method only by which it can be settled—namely, by medical examination.

[1] THE LANCET, July 20th, 1895.
[2] THE LANCET, June 28th, 1890.

CHILDREN'S AILMENTS AND HOUSEHOLD PREVENTIVES.

SOME ailments of children are like a simple mechanical puzzle—obscure, complicated, alarming in their symptoms, very troublesome if mismanaged, but in their cause and explanation simplicity itself. Last week a boy was taken ill from the effects, as was supposed, of a heavy dinner. Thanks to the guiding symptom of pain the true seat of his disorder was quickly discovered, and the rectum was found to be tightly packed with the broken but unmasticated fragments of nuts, a meal of which he had recently consumed on his own account. An anæsthetic and forceps relieved him of his load, the more usual means having failed to do so. A mouth full of decayed teeth showed how, in his case, mastication was well-nigh impossible. The danger of allowing so much rough and hard matter in a state quite incapable of digestion to traverse the length of the intestinal tract, or to become impacted at some point in it, is such as even an unprofessional mind can appreciate. This case, unique perhaps in actual particulars, is one of many, some of them as clear, and some obscure in character, but all capable of much mischief and misunderstanding, which bear one common accusation—indiscretion in diet. Now it is a poisonous ice-cream, now a stale fruit, now a mass of broken nuts. The inevitable question arises—Who is responsible? And its answer will usually acquit the salesman if he be a careful and fair dealer. Child and parent, therefore, must divide the blame, if any, and of the two the more intelligent will naturally have the larger share. Such cases as that above quoted should at all events impress upon parents the lesson, too little regarded, that failure to warn, and to prevent if needful by active measures, the heedless indiscretions of, their children may at any time induce, perhaps by very simple means, an illness of the greatest gravity.

A GERMAN SCHOOL OF COOKERY.

VOLTAIRE said that the English people had 100 religions (according to Whitaker's Almanack we now have about 250) and only one sauce. This, of course, was merely national jealousy; but the fact remains that English cookery is not in general good, and the knowledge of this art among the labouring classes is practically *nil*. Their *batterie de cuisine* consists of a frying-pan, in which they never "fry" but "do" things. Take the upper classes, again—in how many houses does the diner-out get an eatable curry, an omelette that does not resemble the sole of a boot, or coffee that has any right to that name? In Germany an admirable institution exists. A philanthropic millionaire left (according to the *St. James's Gazette*) a legacy to build and endow a school which is to be a model for the State schools of the country.

[1] THE LANCET, July 30th, 1895.

It consists of two houses, one for the children of the upper classes and one for those of the labouring classes. In the cookery school they have to settle themselves what is to be cooked each day and how much they will spend.

"To aid them in their selection and choice of comestibles a list is hung up on the wall, whereon the exact amount of nourishment each food substance contains is carefully explained—for instance, how much 'good nourishment' there is in meat, flour, vegetables, groceries respectively; and on this list it is also clearly shown on good scientific principles how much of each nourishing substance every individual requires per diem. After consulting this chart and making their little list of requirements and liabilities, the girls go out into the garden and gather the herbs and vegetables, which they are taught to cultivate themselves, and then they go and buy the meat, groceries, &c., from a lady superintendent at the store-room. The girls are taught to enter all these various items of their expenditure in carefully kept account-books, and then they start their cooking operations: one makes the fire while another prepares the vegetables &c. In two hours everything must be finished and the little dinner ready. They cook it themselves."

Then they have to "wash up," and afterwards they go home. We believe the School Board teach cookery, but we doubt if their course is as thorough as the German one, and we would adjure our English millionaires to follow the example set by their foreign brother in the possession of this world's goods.

THE HEALTH OF THE POPE.

OUR Rome Correspondent writes:—"The *al fresco* life His Holiness leads in the beautiful demesne between the Vatican Palace and the Janiculan[1] has told favourably on his health, which, all things considered, was never better than to-day. For one thing, he has no threatening of those fainting fits (*deliqui*) which, in the spring months especially and during the exigencies of urgent business, were apt to overtake him. With due allowance for the *anæmia senilis*, of which he has more than the average octogenarian's share, this result is of very good omen. The Commendatore Dr. Lapponi, *archiatro* to His Holiness, in reply to an interrogatory addressed to him the other day, felt warranted in saying: 'If nothing unforeseen happens, the Holy Father's constitution is so sound that he might well attain his hundredth year.' No one is more familiar with that constitution, I may add, than Dr. Lapponi, who was Leo XIII.'s medical adviser as far back as the days when he was Cardinal Archbishop of Perugia. The moment His Eminence became supreme pontiff he would have no other body-physician than Dr. Lapponi, and certainly the measure of health he has enjoyed under a mental and even physical strain that would have tested the vitality of far younger men says much for the judgment and care with which his health is safeguarded. Besides following scrupulously Dr. Lapponi's prescriptions, Leo XIII. observes the simplest diet compatible with effective sustenance. 'Little at a time and often' is his rule, his principal meal consisting of a cup of strong soup, a slice of boiled beef with a yolk of egg, and a wineglassful of Bordeaux or well-matured Marsala. Truly a commendable example of 'plain living and high thinking.'"

STREET NUISANCES.

IN the *Times* of Aug. 20th is a letter from Mr. C. S. Loch, the secretary of the Charity Organisation Society. We commend this letter to everyone who is interested in the cause of charity. The Hospital Saturday street collection was bad enough, but of late an innumerable number of societies have started street collections, and when the craze was in full swing, as it was about two months ago, to walk down Piccadilly or the Strand was a positive penance. At every step a siren or harpy—we will not be too careful to discriminate—appealed for pence "for the little ones" or "the destitute washerwomen" or "the young Bethelites' country holiday fund." We have no doubt that the pennies of the charitable reached their due destination, but what we complain of in this method of collection is that there is no guarantee to the effect that the money is properly applied. In the Hospital Saturday Fund street collection this objection, of course, does not apply, but we fancy we are right in saying that the street collection of the Saturday Fund has fallen off by about £1900—and this result is probably owing to the disgust of street collections which the numberless imitations have inspired. Mr. Loch says we must trust to persuasion rather than legal action; but, in our opinion, if the officials responsible for the sending out these beggars—if, indeed, there are any officials—and, if not, the beggars themselves, were punished under the Vagrancy Acts, something would be done to make the streets a little less odious than they are at present. Organs, newspaper boys who yell, street-sellers of toys that whistle or squeak—all ought to be suppressed as well. The charitable beggar is, however, in some way the most offensive of the lot, and we can only rejoice that by this very multiplication he seems to be tending towards extinction.

[1] THE LANCET, July 13th, p. 128.

HOSPITAL PATIENTS IN VIENNA.

THE attendance of comparatively well-to-do persons in the out-patient rooms of the various London hospitals has long been a subject of complaint. Both general practitioners and the opponents of indiscriminate charity have lifted up their voice against the evil, the reality and magnitude of which are unquestionable, but no adequate or satisfactory method of dealing with it has yet been put into practical operation. The same question has for some years been engaging the attention of the medical profession in Vienna, and according to our correspondent in that city there is a prospect of united action being taken in the matter. The Vienna practitioners complain that not only do persons well able to afford the usual fees attend the out-patients' department of hospitals, but they become paying in-patients at charges so low as to be unremunerative to the institutions, the deficiency being supplied out of the grants provided by the State. In many cases, however, such in-patients when suffering from surgical ailments are influenced by the fact that antiseptic operations cannot be performed in ordinary lodgings. The medical men of the present day are as ready as any of their predecessors to relieve the really necessitous, but it is felt that there is a growing tendency on the part of the general public to seek low-priced medical advice, a state of things which is injurious to the true interests of all parties concerned. With a view to solve the problem, our Vienna colleagues propose that only those patients who can show proof of straitened circumstances shall be entitled either to gratuitous medical aid or to hospital treatment at reduced scales of payment. If the idea reaches the practical stage the results of the experiment will be watched with keen and general interest.

MISLEADING ABBREVIATIONS OF DEGREES AND DIPLOMAS.

IT is not proposed to discuss here in any way whether or not it is desirable that medical men should place after the letters denoting their degrees and diplomas the university or examining board from which such degrees and diplomas were obtained. This question is one which must, we fear, be determined in large part by the exigencies of time and place. What, however, we would briefly refer to is the necessity, or, at any rate, the desirability, of adopting in

tato one course or the other. Half measures in this matter are apt to be misleading, and it is not consistent with the dignity of our profession to adopt methods which may be open to this criticism. The introduction of Diplomas in Public Health has apparently been instrumental in giving prominence to the methods of indication to which reference is here made. For instance, it is by no means uncommon at the present time to notice after a medical man's signature the letters M.D., D.P.H. Cantab., an arrangement from which the justifiable inference is, we submit, that both the degree of Doctor of Medicine and the Diploma of Public Health were procured at the University of Cambridge. In some cases, however, it would seem that the arrangement of the titles does not justify the interpretation which should obviously be placed upon them, and the M.D. degree may even be of exotic origin. It is not altogether clear why the source of a Diploma of Public Health should be specifically stated while that of a degree of Doctor of Medicine remains obscure; indeed, if the general contention be that the public should be educated in the matter of degrees, &c., it would appear to be of more importance that a medical practitioner should be selected on the merits of his M.D. than upon those of his D.P.H. We are not raising the issue of the relative merits of degrees and diplomas, but we would point out that on general ethical grounds it is desirable that if the origin of one degree or diploma is specifically indicated, that of the other should be so too.

THE HYGIENIC ASPECT OF WOOD PAVEMENT.

MR. WYNTER BLYTH embodies in his last quarterly summary of the health of St. Marylebone a report on the above subject. It is, he observes, to be regretted that the several sanitary authorities in the metropolis have not during recent years kept records of the health of those of their employés who have worked on the roadways of their districts, in order that some statistical basis might be formed from which conclusions might in time be drawn. In the absence of any such data, Mr. Blyth has endeavoured to contribute something to the knowledge of the subject by ascertaining experimentally whether the wooden blocks are saturated throughout with horse excreta, &c., or whether this pollution is superficial only. Taking as an index the amount of ammonia present in the upper, middle, and lower slices of blocks which had been laid down in Oxford-street for the last six years, and controlling his results by some of a new block of the same material, Mr. Blyth was able to demonstrate that in a block taken from the centre of the road the greatest pollution was found in the upper slice, although the block was as a whole permeated with pollution. In the case, however, of a block taken from the side of the road by far the greatest amount of pollution was found in the lowest slice, and in an amount much in excess of the block taken from the middle of the road. Mr. Blyth infers from this that the wooden blocks are by no means impervious, and that in process of time they become more or less saturated with impurity. The distribution, too, of the ammonia points, it seems, to the fact that the moisture tends to penetrate the intervals between the blocks in the middle of the roadway, and on reaching the impermeable bedding below tends to pass down to the sides of the roadway, and in this way to saturate the lowermost layer of the side blocks. Mr. Blyth, in conclusion, considers that for the purposes of health asphalt is the best form of pavement, since it, in all probability, is proof against the amount of saturation which he has demonstrated in wood. He recognises, however, the very trying noise which the contact of horses' hoofs with asphalt produces, and in summing up the effect of any one pavement upon health this feature should certainly not be disregarded. Mr. Blyth, it seems, looks forward to the disappearance of our horse traffic from our streets, and to the substitution of vehicles propelled by other motive power. It will not then, he observes, be necessary to consider the pit-pat of the horses' hoofs upon the asphalt; nor, we would add, the pollution of wood pavement by equine excreta.

DEATH CERTIFICATES AND THE RECOMMENDATIONS OF THE SELECT COMMITTEE OF THE HOUSE OF COMMONS.

IN an interesting paper read at the Medical Institution of Liverpool last March Mr. F. W. Lowndes, surgeon to the Liverpool police, discussed the very important question of what we may call irregular death certificates. In 1894 a Select Committee of the House of Commons was appointed to consider the whole question of death certification. The Committee made a number of recommendations, by far the most important of which was that the practitioner should be bound to verify the fact of death, either personally or by means of a certificate to that effect signed by two neighbours of the deceased. As the law stands at present, no verification of the fact of death is necessary, the practitioner being entitled to say, "A B died, as I am informed." This Mr. Lowndes rightly considers a very grave defect. He also lays stress upon the fact that in some cases a practitioner who has only seen the patient after death has considered that to be "attendance" and has accordingly filled up the certificate. Mr. Lowndes suggested that the word "alive" should be inserted in the form, so as to avoid the possibility of such things happening. Passing on to the uncertified deaths as inquired into by the coroner, Mr. Lowndes quoted the recommendation of the committee that the preliminary inquiries as to whether an inquest should or should not be held should no longer be left to the coroner's officer to decide, and as concerning coroners' inquests he quoted the following verdict of a coroner's jury which is worthy of the men of Gotham: "Child, three months old, found dead, but no evidence whether born alive." The recommendations of the Select Committee have not yet passed into law; but we can only echo Mr. Lowndes's wish that the Legislature will improve our system of death registration.

THE DIFFUSION OF SMALL-POX.

THE decrease in the cases of small-pox recorded in the week ended Aug. 10th—namely, a total of 54, as compared with over 100 in the week preceding—was not maintained last week, when the number rose to 81. Whilst, however, showing such a rise, the week was not one of steady increase, inasmuch as on one day alone the admissions to hospitals of the Metropolitan Asylums Board numbered 29, and on another 10; and earlier in the week one day accounted for 17 removals, three days in this way contributing 56 of the 79 admissions effected in the week. As may well be supposed, many sanitary areas sent cases, though, speaking generally, those invaded were in the eastern and southern parts of the metropolis. There was happily only one registered death in the week, this being of an individual aged over twenty years. The deceased belonged to the parish of St. Martin-in-the-Fields, and no statement was made as to vaccination. At the close of the fourth week of July there were just on 200 patients under treatment for small-pox in hospital, but last Saturday the number had swollen from 237 and 273 to 336; and the earlier days of the present week showed no falling off in the fresh patients being admitted. Round London there was some little small-pox in the West Ham vicinity, and one or two cases in other parts of the suburbs. In the provinces the chief centre of the disease seems to be in the Lancashire towns, where many cases were recorded last week. In the preceding week some eight attacks came to light at Oldham, and these were treated in the Moscow Hospital

at Highmoor, outside the borough, where last week, as well as in the adjoining urban district of Chadderton, there were multiple cases reported, the circumstances calling for the ever ready measures of prevention which are adopted in these towns. At Wigan, too, there has been a smart outbreak, and cases which have occurred recently at Horwich and at Bradley Fold, in the absence of proper hospital accommodation, have been taken into the hospitals of adjacent councils at a weekly cost per patient of £7 7*s*. A single case occurred last week in the Greengate division of Salford, and 6 cases were recorded in Manchester, the patients being promptly looked to and isolated, the disease having thus made but little headway in the city. In Dublin in the week ended Aug. 10th there were 5 fresh admissions to hospital, 2 discharges, and 28 acute cases still under treatment, in addition to 4 convalescent patients at Kilmainham Hospital.

SCHOOL BOARDS AND STONE-THROWING.

A QUESTION of liability on the part of the School Board was recently discussed in the West London Police-court. In this case the plaintiff objected to the nuisance caused by children in a school playground breaking the neighbouring windows by throwing stones, and required the Board to put up a wire fence for his protection. The presiding magistrate maintained that the children alone were responsible for their misdemeanour—a somewhat barren decision, it would seem, unless someone else were in turn responsible for them. We presume that though, happily, the boy need not in regard to this dangerous peccadillo be father to the man, he is man enough in the person of his father to make amends for his offence. The parent, in short, is liable, and the School Board, which does not include stone-throwing in its syllabus of instruction, will not replace him in his parental privilege. This does not mean that the officials of the Board should sit with folded hands and take no notice of what is going on within their own premises. Stone-throwing must be promptly checked, and its prohibition strengthened by an exemplary penalty. If this be done perhaps wire fences and the like palliatives may be surrendered in favour of the radical cure. If it is not done we fail to see under what moral or legal sanction the shadowy memory of a parent's home lessons on the golden rule can suffice to transfer the Board's responsibility.

MEDICAL PRACTICE IN BORNEO.

PATIENTS within the borders of our United Kingdom have been known to complain that they were sometimes compelled to endure hard treatment at the hands of their medical attendants; but if, as has been authoritatively asserted, to derive comfort from the superior woes of others be indeed characteristic of suffering humanity, we recommend all who may deem themselves medically aggrieved to take note of the manner in which (according to the *Sarawak Gazette*) the native medical men of Borneo are wont to serve the unhappy creatures whose hard fate it is to become the victims of their tender mercies. Private Unong (of Kabong) having caught some river fish called "buntal" proceeded to cook them for his dinner, but only partook of three small ones. In a very short time he began to experience most peculiar sensations, the like of which he had never felt before. His lips and tongue grew numb and seemed as though they were swelling to an enormous size, and before long a similar kind of feeling gradually extended down his trunk and limbs until it pervaded pretty nearly the whole of his body. He contrived, however, to summon help, and when his comrades perceived his condition hey promptly called in several native hakims, who lost no time in subjecting the afflicted one to a course of treatment *secundum artem Malayensem*. There is a root indigenous to Northern Borneo which is popularly supposed to be endowed with some very marvellous properties, including, amongst the rest, the power of inhibiting intoxication from alcohol. With this remarkable drug as basis a mixture called in the vernacular "akar bangun" was fabricated and administered to the luckless patient as long as he could be induced to swallow it. The gentle physicians then fastened him upon a kind of shelf over the kitchen fireplace and inaugurated a species of slow roasting with what they, no doubt, thought was music of a high order. How long this stage of the "cure" continued is not clear, but evidently the Bornean hakims were methodical people with large ideas regarding their personal dignity and constitutionally opposed to anything resembling hurry. At length a violent fit of vomiting supervened, which afforded the semi-incinerated patient great relief; and, as this was apparently the crisis aimed at, he was lifted off his shelf, whereupon he incontinently fell into a deep sleep, which lasted two days and two nights. It must not be supposed, however, that the cure was now complete—far from it. During Unong's prolonged somnolence another compound (which is described as "a most efficacious medicine") had been prepared, the chief ingredient consisting of "shavings of porcupines' teeth," and this the poor fellow was compelled to drink as a preliminary to further roasting. Eventually the private, who must have had a wonderfully strong constitution, declared that he was "fit for duty," and thus escaped from the hakims' clutches. His case is surely a notable example of a sick man's recovery in spite of his physicians.

THE "SAFE ADMINISTRATION OF CHLOROFORM VAPOUR."

MR. ALFRED WRIGHT, late medical superintendent of the Westport Hospital, New Zealand, writes that after an experience of forty years he believes chloroform can be safely given if care be given to the following points. The administrator should devote his sole attention to the chloroform. The chloroform should be administered from an inhaler which admits of accurate regulation of the quantity of vapour given. This desideratum is best met, he thinks, by employing the most recent modification of Junker's inhaler, called the "regulating chloroform inhaler," fitted with the feather respiration indicator. Mr. Wright, although he has never had a death in his practice, believes all fatalities are due to respiratory failure, and he describes the well-known symptoms of death by overdose. In cases attributed to heart failure Mr. Wright believes an error of diagnosis is in the hurry of the moment made, and the true cause of death in all cases is a chemical change in the blood which prevents its due aeration. He emphasises the dangers of "happy-go-lucky" administration of chloroform.

THE EXPLOSION AT THE MILE-END INFIRMARY.

WE are all aware that it is easy to be wise respecting causes and effects after an event; yet we may even then be wise to great advantage, and we are therefore justified in accepting whatever practical truths may be learnt from the unpleasant teachings of disaster. The recent explosion at the Mile-end Infirmary is an example of this class which is widely instructive. What mischievous consequences might have resulted under conditions less favourable to the safety of the inmates we may judge from the damage actually done. The upheaval of the garden and front corridor, the destruction of floors in two wards and of many windows, and finally an outbreak of fire which wrought considerable havoc in the basement of the building—these effects may suffice to suggest what further evils might have been. We have to consider also the fact that the infirmary contained at the time of this occurrence over 350 inmates, many of them seriously ill, and some possibly infirm in mind as well as in body. It

was a happy circumstance that this accident occurred in the daytime. Had it happened at night the efforts of officials could not have been equally prompt and effectual, and the consequences of a possible panic would be difficult to estimate. Notwithstanding the fortunate absence of these graver features, however, it would be folly to omit the use of any and every precaution which may ensure safety in a similar emergency in future. The importance of providing means of exit from all public buildings is now generally admitted, and it has not been overlooked in the construction of modern hospitals. In the older buildings it is possible that there may still be room for improvement in this particular. The like may be said in regard to hydrants and hose, which in the hands of a few capable men prevented the accident at Mile-end from becoming a catastrophe. As regards the cause of this occurrence, an official inquiry will doubtless enlighten and instruct public opinion. A point of evident importance, though clearly under-estimated in this case, is to be found in the fact that though the garden soil is said to have been impregnated with gas escaping in large volume from a main pipe, no means were used to prevent the use of lighted matches by persons walking in the grounds.

THE BATTLE OF THE CLUBS AT CORK.

IT was very gratifying to gather from our Cork news that there was a reasonable prospect of the questions in dispute between medical men and the clubs being discussed in an adequate manner and under conditions giving a fair prospect of success. The Mayor of Cork has most properly interested himself in the settlement of a dispute which is disastrous to all parties concerned. No use of his Worship's office could be more appropriate than this one of mediator between a liberal profession and bodies with which it wishes to deal liberally, while preserving due respect for its own grave and responsible interests. The profession as requested sent six representatives to meet an equal number of representatives of the clubs, the Mayor presiding. But we regret to learn from our Cork correspondent, as we go to press, that the proceedings terminated without any understanding being arrived at.

THE lectures of the Royal College of Physicians of London for the coming year will be delivered as follows: The Goulstonian Lectures by Dr. Patrick Manson, the Lumleian Lectures by Sir Dyce Duckworth, the Croonian Lectures by Dr. George Oliver in 1896, and by Dr. Greenfield in 1897. The Bradshaw Lecture will be delivered on Nov. 7th, 1895, by Dr. Bradbury.

THE RELATIVE HEIGHTS AND WEIGHTS OF BENGAL PRISONERS.

BY SURGEON-CAPTAIN W. J. BUCHANAN, M.B. DUB.,
SUPERINTENDENT, CENTRAL GAOL, BHAGALPUR, INDIA.

THE following table has been compiled from office records in the Central Gaol, Bhagalpur. It is based upon the recorded heights and weights of over 8000 male adult prisoners, most of whom have been admitted to Bhagalpur Gaol, all in good health, in the last five years. All those recorded as having been admitted in indifferent or bad health have been excluded from these figures. They, therefore, represent the average weight for each height of healthy men.

Height.	Weight.	Height.	Weight.
5 ft. 0 in. ...	98 lb.	5 ft. 7 in. ...	118 lb.
5 ,, 1 ,, ...	100 ,,	5 ,, 8 ,, ...	122 ,,
5 ,, 2 ,, ...	103 ,,	5 ,, 9 ,, ...	128 ,,
5 ,, 3 ,, ...	106 ,,	5 ,, 10 ,, ...	132 ,,
5 ,, 4 ,, ...	108 ,,	5 ,, 11 ,, ...	154 ,,
5 ,, 5 ,, ...	112 ,,	6 ,, 0 ,, ...	138 ,,
5 ,, 6 ,, ...	115 ,,		

The figures differ slightly from a similar table published by me in the *Indian Medical Gazette* some time ago; that list was found to be based in some instances on too few cases, men over 5 ft. 8 in. not having been found in sufficient numbers. This has been rectified by an examination of all the taller men at present in the gaol, and by use of figures kindly supplied by the medical superintendents of many other gaols in this province. The figures have been found to be applicable to most parts of the province of Bengal, excluding, of course, the hillmen, such as are found in Nepal and the Darjiling Himalayas. They have been tested to a large extent also in the central gaol, Nagpur, in the Central Provinces, and found to apply almost exactly. They do not, however, apply to the inhabitants of the North-West Provinces, Oudh, and the Punjab, where the men are of a taller and heavier type. They contrast markedly with figures recorded for heights and weights of European adults. As no table of the kind appears to have been published before, it is considered they will prove interesting to anthropologists in Europe as well as useful to medical officers in charge of gaols in India. For practical purposes I find the following rule sufficiently accurate for ascertaining the normal weight of a man of this class. Taking 100 lb. as the correct weight for a man of 5 ft., if we add 3 lb. for every inch above 5 ft. we shall arrive at a fair average normal weight—e.g., a man of 5 ft. 5 in. $=5\times3+100=115$ lb. It must be remembered that a prisoner passed as of "good health" is considered liable to hard labour. I maintain that if a man of this part of India reaches the standard above prescribed he will be capable of performing the severest form of hard labour.

In his work, "La Donna Delinquente," Lombroso gives a rule for computing the normal weight of an individual derived from measurements of Italians. The rule is as follows: "A person is regarded as having a weight equal to the average in whom the number of kilogrammes which represent the weight is equal to the number of centimetres by which their statures surpass the metre." This is an exceedingly rapid rule for calculating weights for height if we use the decimal measurements. It works out as follows in pounds and inches: starting with 110 lb. for 5 ft., for every inch above this 5 lb. are to be added. This is too high an estimate for ordinary peasants of the province of Lower Bengal, but as far as my experience goes of men of the North-West Provinces and Punjab in India I think it would prove fairly exact.

Bhagalpur.

THE BATTLE OF THE CLUBS AT BRUSSELS.

(FROM OUR SPECIAL COMMISSIONER.)

THE struggle between the medical profession and medical benefit societies has reached a most acute stage in Belgium. The situation across the Channel is identical with what exists in Great Britain and Ireland. The only difference rests in the fact that the medical men who practise in the Belgian capital have created a much better fighting organisation than anything of the sort actually in existence among members of the profession on this side of the Channel. There are about 450 medical men in practice at Brussels, and of these 430 are paying members of the Collège des Médecins de l'Agglomération Bruxelloise (Syndicat). For the sake of brevity this association is generally called Le Syndicat Médical. Each member, to cover working expenses, pays an annual subscription of 3 fr. and pledges himself to pay any levy, whenever made, so long as the sums raised from time to time do not exceed in all the sum of £4 in one year. As yet no levy has been made, and the 430 annual subscriptions of 3 fr. each have sufficed to cover all the working expenses. On the other hand, ninety-five mutual aid or benefit societies of Brussels have federated and elected a general managing council. This is known as the Federation des Mutualists. The members of the Federation number about 12,000, who generally pay 2 fr., or 1*s.* 8*d.*, per annum for medical attendance for themselves and their families, and this represents in all a population of at least 50,000 persons. The

Federation of the Mutualists had engaged the services of eighteen general practitioners and of two specialists. The salaries paid varied from 700 fr. to 1400 fr. The salary was estimated according to the number of Mutualists residing in the district of each officer. The officers employed had to reserve two hours for consultations every day and to go to the homes of the patients who could not come to their surgeries. They had to see patients whatever the nature of their illness and to help in case of operations. An extra allowance of 25 fr., or £1, was made for accouchements or miscarriages, and 2 fr. for vaccinations at the surgery or 3 fr. for vaccinations at the patient's home. But as these extra allowances had to be paid to the medical man by the patients themselves it very often happened that the officers failed to obtain the money. It is absolutely impossible to estimate what this rate of payment represents per visit. The medical officers in central districts have a larger number of patients, but the distances are much shorter. A medical man who had a suburban district showed me his books, and, roughly speaking, I should say that he gave fifteen consultations per day, Sunday included. His salary was 1200 fr. per annum, so that he would receive on an average 22 centimes, or a trifle less than 2¼*d*., per consultation. This, however, is no rule; the proportion of payment varies greatly per district. It must also be borne in mind that the cost of living is much cheaper in Belgium than in England; that where a high-class consulting physician would receive in London a two-guinea fee, in Brussels from 16*s*. to £1 would be given; and that in ordinary practice among the poorer classes fees of one and two francs are considered very acceptable.

As in all other countries, a number of comparatively well-to-do persons have crept into these "mutualist" or benefit societies; indeed, some middle-class societies have been constituted that should never be allowed to contract for such cheap medical service. These are the Fraternelle Belge, the Mutualité Commerciale, and the Société des Voyageurs de Commerce. It is objected that commercial men and commercial travellers can well afford to pay for medical attendance, and cases are cited of members of these societies who are in receipt of incomes equal to even £1000 a year, yet they expect to obtain medical attendance for themselves and their families in exchange for a payment of only 2 fr. (1*s*. 8*d*.) per annum. A case was described to me of one of these wealthy mutualists, as the members of such societies are called, who paid a subscription of 4 fr. or 5 fr. a year. He had an operation performed, and gave the operating surgeon, who was not in the service of the Mutualist Federation, a fee of £24; but he gave nothing to the medical officer of the Federation who also attended him, and he obtained from the Federation medicaments, bandages, &c., to the value of £6. If he could afford to give the operating surgeon £24, why should he not also pay at a proper rate for his medicaments and his ordinary medical attendant? Another medical man related to me how he had been called up in the middle of the night to attend the wealthy owner of a large establishment, who refused to give him a fee on the ground that he paid 1*s*. 8*d*. per annum to a mutualist society. Under these circumstances the Medical Syndicate opened communications with the Mutualist Federation. After lengthy negotiations the Federation suddenly offered to increase the salaries, in some cases to the extent of 500 fr. (£20) per annum. Formerly the increase allowed never exceeded £4 a year. The Medical Syndicate urged that they were not seeking to obtain more money for medical services. That was not the principle at issue. There was no lack of medical men who would gladly give their services for nothing if it was to relieve a genuine case of poverty, but they absolutely refused to attend rich men on the same terms as the poorly paid labouring classes. At last the Federation replied that they would endeavour to eliminate the well-to-do members of their societies; and, acting on this principle, they had refused to admit to their ranks the Israelite Benefit Society and the Société des Sauveteurs. The Federation, however, gave no sort of explanation as to how they proposed to eliminate the well-to-do element. They, on the contrary, refused to take any so-called inquisitorial measures so as to ascertain what was the income of their members. The Medical Syndicate now replied that, if the Mutualist Federation could not or would not do this work, the medical men themselves were quite prepared to carry it out; and claimed that the officers in the service of the Federation should have the right to refuse to attend such members of the mutualist societies as could afford to pay a proper fee. This, and this only, is the point at issue. All other questions raised are of secondary importance. The Federation, however, refused to negotiate further or to in any way amplify the vague promise they had made. Thereupon the twenty medical men in the service of the Mutualist Federation, obeying with exemplary discipline the orders issued by the Medical Syndicate on July 5th last, gave in their resignations on July 6th. Conforming, however, to instructions received from their syndicate, they have from motives of humanity continued to attend the patients actually under treatment when the movement commenced.

To meet this emergency the Federation offered high salaries to anyone who would undertake to replace the medical men who had resigned. The scratch staff of medical officers thus got together were quite incapable of doing all the work required. There were never at any time more than eleven enrolled, and I am assured that at the present moment only four of these render any really effective service. Being thus absolutely incapable of supplying the medical assistance which the Federation are pledged to provide for all their members, an announcement was made that any member of the affiliated mutualist societies might consult any medical man he chose and pay him a fee of 2 fr. The money would be reimbursed to the member by the society to which he belonged, only he was especially recommended not to consult any of the twenty officers who had resigned. The Medical Syndicate met this manœuvre in a very effective and simple manner. They issued orders that all practitioners, except the twenty officers in question, were to refuse to give receipts for the 2 fr. fees offered by the mutualists. The latter were, therefore, unable to prove that they had paid the 2 fr., and consequently could not be reimbursed. They then naturally, and in spite of the recommendation received to the contrary, began to gravitate back to the Federation officers, from whom they had no difficulty in obtaining the receipt for the 2 fr. Thus these officers are getting a number of their patients back again, and, financially speaking, on very much better terms.

In this struggle the Medical Syndicate have no power beyond that derived from the voluntarily accepted discipline of the members. Fortunately, this discipline has been very strictly maintained. The Federation had appointed a medical man, with the high salary of 4000 fr. per annum, as the chief of their medical service. For the success of the movement it was absolutely indispensable to dislodge this adversary. Measures were accordingly taken. He was systematically "cut" by the whole of the profession; no one would enter into consultation with him. If he came near his old medical friends they put their hats on their heads and their hands in their pockets and refused to shake hands with him or to speak to him. If he entered a café or any other public place all the medical men present at once rose and left. He was medical officer to one of the Brussels theatres; his colleague, the senior medical officer of the theatre, went to the manager and threatened to resign his post if his colleague was not at once dismissed. This request was immediately granted. The whole medical staff of the Civic Guard of Brussels tendered their resignations if the officer, who was one of their colleagues in that service, was not dismissed. Though the position of medical officer to the Civic Guard is only an honorary office it is much envied by the profession, as it generally brings with it a considerable increase of private practice. The colonel of the Civic Guard, who did not at all relish losing the services of all the medical men enrolled, at once acted as requested. The result was that the chief of the newly constituted medical staff serving the Mutualist Federation found life absolutely unendurable, and finally came to the Medical Syndicate, apologised for his conduct, joined the Syndicate, undertook to obey their orders, and therefore had to at once resign the appointment the Mutualist Federation had given him. As already mentioned, I am assured that the Mutualist Federation have now only four medical men at their service who are really capable of doing the work required.

Brussels, Aug. 20th.

THE HORSE SICKNESS OF SOUTH AFRICA.

THE recently issued report of the Colonial Bacteriological Institute, Graham's Town, Cape of Good Hope, for the year 1894, is mainly devoted to work done in the investigation of the South African epizootic known as "horse sickness." This

disease seems to be present in some parts of Cape Colony every year, and at considerable intervals assumes the proportions of a formidable epizootic. During the two years 1854–55, when the colony was much less extensive than at present, it carried off 64,800 horses, mares, and foals, and the mortality in the recent outbreak of 1891–92 has been computed at 13,900 horses and 140 mules. Systematic investigations of this disease by a trained observer were commenced in 1887, when Mr. Joshua Nunn, F.R.C.V.S., as a result of his observations in Natal, concluded that it is not anthrax, and that it is not contagious. In June, 1891, Dr. Alexander Edington of Edinburgh became director of the newly created Bacteriological Institute, and has continued the investigation of horse sickness since the beginning of 1892. The death-rate of animals attacked is from 95 to 99 per cent. Invariable post-mortem phenomena are copious effusion of serum into the pericardium, pleuræ, and pulmonary tissue, the presence of yellow solidified serum in the subcutaneous tissues of the neck, and of yellow fluid in the trachea. Death is immediately due to the effusion into the pericardium, lungs, and pleuræ. The effusion into the lungs is not only along the lines of the interlobular septa, but is actually into the air cells themselves, so that the animal may be practically drowned in its own blood serum. Dr. Edington found that not only is inoculation of healthy animals possible, but that if the material for inoculation be suitably selected a fatal result will constantly follow. In the blood of all horses dying from uncomplicated horse sickness, after a period of nine or ten days' illness, reckoned from the date of infection, he discovered peculiar oval bodies much larger than micrococci. They are composed of a delicate cell wall with flattened and thickened ends, containing a peripheral substance which stains much less deeply than the cell wall, while centrally there is a round or oval body that stains deeply. In size they may be 3·5 μ long by 2·5 μ broad, in other cases 5 μ long by 3 μ broad, while in a few exceptional instances they may be nearly spherical with flattened ends. The ends or poles are characteristic. They are always flat or slightly concave from without inwards, and the extreme points of each flattened pole are usually thickened, so that there is an appearance as of two micrococci lying upon the free ends. The body placed centrally is evidently a nucleus, and stains very deeply. The staining fluids are 1 per cent. aqueous solutions of dahlia, methyl violet, and fuchsine. Cover glasses are prepared with thin films of blood which are dried in the air, quickly fixed by passing thrice through the flame of a Bunsen burner, stained for three minutes, washed in sterilised water, dried, and mounted in balsam. Numerous and varied cultivation experiments were unsuccessful. The organism is not a bacterium, but the vegetative spores of a pathological mould, the mycelium of which Dr. Edington has also discovered. He has proposed for the organism, pending the further working out of its life history, the name of œdemamyces, and for the disease it produces œdemamycosis.

In Cape Colony humanised vaccine lymph is distrusted on account of the prevalence of leprosy, and shortly after Dr. Edington's arrival in the colony he advised the Government that the preparation and public supply of calf lymph should be one of the functions of the Bacteriological Institute. The suggestion was adopted and the work was soon carried out on a great scale, 146,344 tubes having been sent out during 1894, greatly to the financial advantage of the Institute. On April 30th, 1895, he made the very important announcement, in a letter addressed to the Secretary for Agriculture, that he had discovered a vaccine protective against horse sickness. At the same time he requested that he might be admitted to a share in the profits derivable from the sale of his vaccines; but the official reply was that "any discoveries you may have made or may make whilst engaged in investigating the diseases of stock, for which purpose you specially engaged yourself to Government, are, as a matter of course, the property of the State, and I am to inform you that your claim to a share of the profits on any vaccines resulting from your investigations at the Institute cannot be entertained." Dr. Edington afterwards unreservedly withdrew any claim which he might seem to have advanced to a proprietary right in any of the discoveries made in the Institute or in the preparation of the vaccines. The results attained under his management were commended last July by a select committee appointed by the House of Assembly to inquire into the working of the Bacteriological Institute.

FORTY-NINTH REPORT OF THE COMMISSIONERS IN LUNACY TO THE LORD CHANCELLOR.[1]

THE Annual Report of the Commissioners in Lunacy for the year 1894 commences with the statement that the total number of lunatics, idiots, and persons of unsound mind included in the returns, statutory and other, made to their department was, on Jan. 1st, 1895, 94,081, being an increase over the corresponding number on Jan. 1st., 1894, of 2014. The total is made up of 8250 private, 85,089 pauper, and 742 criminal patients, and the summary shows a decrease of 61 in the private class, but increases of 2064 and 11 respectively in the pauper and criminal classes. The private patients appear to have increased by 28 in county and borough asylums and by 6 in provincial licensed houses, but they decreased on the other hand by 59 in registered hospitals, by 23 in metropolitan licensed houses, by 3 in naval and military hospitals, and by 10 as regards single patients. The pauper patients appear to have increased very generally, with the exception of a decrease of 1 in registered hospitals and 9 in ordinary workhouses. In only eight of the fifty-six "union" counties in England and Wales was there a decrease in the number of pauper lunatics. The increase was largest—viz., 482—in the county of London, but contrasts favourably with that of 1893—viz., 800. In Lancashire it amounted to 202, which was, however, less by 63 than the increase of 1893. In Yorkshire and Essex, where the increases were 186 and 141, these increases were respectively 75 and 81 more than in 1893. An unusual feature is the increase in the number of out-door lunatic paupers, this class having for many years shown a marked tendency to decrease.

The Commissioners again discuss the important question as to whether the increase in the total number of lunatics implies an increase of insanity in its more active forms. In connexion with this matter they compare the average annual increases since 1859 and point out that the average annual increase in the last six years (1889 to 1894 inclusive)—viz., 1623—is less than that of the decades 1859 to 1868 and 1869 to 1878, when it was 1641 and 1671 respectively, in spite of the large increase of the general population. The proportion, however, of the total yearly admissions of lunatics into institutions for lunatics and as single patients to total population has increased almost continuously from 1869 to 1893, but it is gratifying to find that there was a slight decrease in 1894, the ratio per 10,000 of admissions to population dropping from 5·99 to 5·88. This steady increase of admissions, with the exception of 1894, is attributed partly to the reception in recent years of more cases of mental decay resulting from old age, the ratio of old age admissions to total admissions being 2·2 per cent. higher in 1893 than in 1883.

An important factor in the accumulation of cases is the diminished death-rate in asylums in the last thirty-six years, the ratio falling from 10·31 per cent. of the average numbers resident in the decade 1859–68 to 9·78 for the past six years. Against this, however, must be set the fact that the recovery rate has increased, the ratio last year being 40·31 per cent. of the total admissions, or 1·86 higher than in 1893, and 0·65 higher than the average of the ten years including 1894. The diminished death-rate and increased recovery-rate, however, when balanced against each other are calculated to account for 4228 of the total number under care at the end of 1894. The figures shown in the report certainly give no cause for alarm as to the prospect of a marked increase in the number of cases of insanity in proportion to the population, and the increasing recovery-rate and diminishing death-rate are matters upon which those responsible for the management of institutions for the insane throughout the country are to be heartily congratulated. The report contains the usual statistical tables which space will not permit us to enter upon here. Under the head of County and Borough Asylums the Commissioners refer to the desirability of the establishment by local authorities of special accommodation for pauper idiot and imbecile children, of which there is great lack at present, the association of these children with the adult insane being an undoubted evil. A separate block for this class has been

[1] London: Eyre and Spottiswoode. 1895.

built at the Northampton County Asylum. The Commissioners express their strong impression of the need of cheap accommodation for the insane who are not paupers, but who cannot afford to pay much for their treatment, and they also desire to advocate the extension of lunatic hospitals on a charitable basis

The Annual Report of the Commissioners always contains some unpleasant reading, and as evidence that patients are not the only people liable to injury in asylums, may be mentioned the fact that no less than three medical superintendents were the victims of murderous assaults by patients during 1894—viz., Dr. Wigglesworth at Rainhill, Dr. Deas at Exeter, and Mr. Case at Leavesden. The Commissioners urge these facts as an additional argument for the recognition by county councils of the arduous and dangerous duties of those having the care of the insane, and the desirability of the universal establishment of pensions for long service or accident. The number of suicides in county and borough asylums was ten only, but there is a rather long list of fatal casualties during the year, and a remarkable death is reported—namely, that of a man from shock following gastrostomy, at which operation nearly 1¾ lb. of nails, buttons, wire, &c., were removed from the stomach.[2]

A large part of the remarks about registered hospitals consists of the Commissioners' report on their special inquiry respecting the death of a patient while in the "dry pack" at the Holloway Sanatorium, and they comment on the fact that their power of control over hospitals for the insane is very limited, and think it ought to be extended by the Legislature. The new regulation on the subject of mechanical restraint, which is found in Appendix P in the Report, is apparently to some extent the outcome of this unfortunate case. The Commissioners report satisfactorily, upon the whole, of the condition of licensed houses throughout the country, though they suggest alterations and improvements in several institutions. The Report closes with the Commissioners' expression of regret at the death of their colleague, Mr. James Wilkes, who, previously for fourteen years medical superintendent of the Stafford County Asylum, had been a Commissioner since 1855.

THE BRITISH INSTITUTE OF PUBLIC HEALTH.

THE fourth annual congress of the British Institute of Public Health assembled at Hull on Aug. 8th, and was largely attended not only by members of the Institute but by official delegates from upwards of seventy municipal authorities, County Councils, School Boards, Metropolitan Vestries and Boards of Works, &c.

The opening ceremony was the formal reception of the visitors on the afternoon of Aug. 8th at Hymers College by Alderman Richardson, who is Mayor of Hull and President of the Congress. He said that this visit of the Institute was very gratifying to the people of Hull, especially as this was the first time that such a meeting had been held in a provincial town. Hitherto the Institute had met in the metropolitan cities of London, Edinburgh, and Dublin, and the selection of Hull on the present occasion was very acceptable to the inhabitants. Their population in the year 1847 was only about 70,000, and the death-rate was 31 per 1000; in 1894, however, the population had risen to over 216,000 and the death-rate had fallen to 16·9 per 1000. A very large sum had been expended in producing this happy result, but the money had been well laid out, because an improvement in the health of the people resulted in an increased capacity for work and for enjoyment of life. Hull was an ancient as well as a prosperous town; its charter of incorporation dated back to 1428, and was the second of the municipal charters of the kingdom.

The Sheriff of Hull and the Mayors of Huddersfield, Folkestone, and Birkenhead having spoken, Professor W. R. Smith, President of the Institute, replied that his first duty was to thank the mayor and corporation for inviting the Institute to hold its congress this year in Hull. They were also greatly indebted to his worship for inducing the various municipalities and county councils to send nearly 300 delegates to assist in their deliberations. The council of the Institute were glad to have an opportunity of coming to Hull, it being the third port in the United Kingdom and the gateway to the great industrial centres of Yorkshire and the north of England. It was worthy of note that the Hull death-rate for 1894 was only 16·9 per 1000, and that this succeeded a death-rate of 20·2 per 1000 during the previous decade. The death-rate from zymotic diseases was rather high during 1893, being as much as 4 per 1000, and it was only right that they who came from districts which were not seaports should recognise that for their low mortality from such diseases they were under deep obligations to Hull and other towns similarly circumstanced. The high death-rate in 1893 was, in fact, mainly caused by deaths from cholera, and it was very satisfactory to those who lived in inland places that that great scourge was promptly dealt with at the ports and prevented from spreading in the country.

Sir Henry Littlejohn said that the corporation of Edinburgh had expended nearly three-quarters of a million in improving the sanitary state of the city.

Sir Charles Cameron expressed his opinion that no better arrangements for preventing the spread of cholera could be made than those which had been carried out at Hull. He thought that the expense of making these preparations should not fall upon Hull and the other seaports, but should be defrayed by the country at large.

The work of the four different Sections began on Friday, Aug. 9th, and concluded on the following Tuesday, and among the many interesting subjects introduced to the notice of the meeting may be mentioned Epidemic Cholera (Surgeon-Lieutenant-Colonel Pringle), Public Water-supplies for Rural Districts (Sir James Russell), Municipal Abattoirs and Meat Inspection (Dr. S. Marsden), Cremation (Sir Henry Littlejohn), and Dust and Refuse Disposal (Mr. S. J. Beaman). We print in our issue to-day the address of Dr. J. Spottiswoode Cameron, the medical officer of health for Leeds borough and President of the Section of Preventive Medicine.

At the conclusion of the work of the Sections votes of thanks were accorded to the chairman and governors of Hymers College for placing the building at the disposal of the Congress, to various local gentlemen who had entertained the members, and to the office-bearers of the Institute.

SHENTON *v.* SMITH:

THE CASE OF MR. HENRY LIONEL SMITH, M.R.C.P. IREL.

OUR readers are familiar with this case, but it is of such striking interest, not only to medical men, but to all whose duties bring them into contact with things official in our colonies, that we consider it right to report from time to time any progress that has taken place in the attempt to secure for Mr. Henry Lionel Smith something a little more tangible than sympathy in his admitted wrongs. The story will always bear recapitulation, for the details are a little involved, though the wrongs inflicted are very patent to comprehension.

In 1887 Mr. Smith received the post of acting medical officer at Albany. In the following year events happened during the transfer of the Albany Colonial Hospital to new buildings which resulted in the death of a patient suffering from enteric fever, the immediate cause of death being, as was alleged, exposure to cold. For this death a coroner's jury of three persons attached blame to Mr. Smith, and the Government dismissed him, an order being passed on July 9th, 1888, informing him that his tenure would cease at the end of the year. Mr. Smith proved that he was not responsible for the mishap, and that the act of the workmen which led to the exposure of the patient to cold was done in his absence and without his authority, and the Government allowed an appeal to the Secretary of State, who upheld the Governor's decision. Thereupon Mr. Smith—having been refused a hearing before the Medical Department in West Australia, while Sir William Robinson had declined to arbitrate after the first trial—entered a Petition of Right, with the Colonial Secretary as defendant. In this trial the jury disagreed, eleven being for Mr. Smith and one against, but in a subsequent trial they found for the plaintiff, with

[2] An account of this case by Dr. J. F. Gemmel, with an engraving of the nails &c. contained in the stomach was published in THE LANCET, vol. ii. 1894, p. 432.

£200 damages for wrongful dismissal. On the further consideration of whether the plaintiff had or had not been wrongfully dismissed the Court were divided, so that the original verdict remained undisturbed. In an appeal from this, specially allowed to the West Australian Government, before the Judicial Committee of the Privy Council on Feb. 2nd, 1895, the Court ordered that judgment be entered for the appellant (the Government of West Australia), but without costs in regard to the litigation in Australia.

Colonial civil servants, therefore, holding acting appointments can be dismissed at any moment by the Government without any reason being assigned, while the regulations are of no value as protection to them.

On July 12th, 1895, the following official letter was sent by the Royal College of Physicians of Ireland to Mr. Chamberlain, the new Secretary of State for the Colonies:—

"Royal College of Physicians of Ireland, Dublin,
"July 12th, 1895.

"SIR,—I am directed by the President and Fellows of the Royal College of Physicians of Ireland to bring under your notice the case of Mr. H. Lionel Smith, a Licentiate and Member of this College. In 1887 Mr. H. L. Smith was appointed acting medical officer at Albany, West Australia. After a year's service he was notified of his dismissal by the governors, owing to the death of a patient in the Albany Colonial Hospital, for which a coroner's jury, consisting of three persons, attached blame to Mr. Smith. An appeal to the Home authorities having been made in vain, Mr. Smith, by entering a Petition of Right, took proceedings against the Colonial Government. The jury gave a verdict in his favour, finding that the Government had no reasonable cause to dismiss him, and awarding him £200 damages and costs. Against this decision the Colonial Government appealed to the Full Court, and there the verdict of the jury remained undisturbed. A final appeal was then made by the Government to the Privy Council, and this tribunal has given its decision against Mr. Smith, thus affirming the right of Government to dismiss civil servants holding acting appointments without notice and without assigning any cause. The President and Fellows wish to disclaim any intention of disputing the decision of the Judicial Court of the Privy Council, but they think it their duty to lay Mr. Smith's case plainly before your notice. Mr. Smith was dismissed owing to a verdict of a coroner's jury, consisting of three persons, after a superficial inquiry, while subsequently, when the case was heard before twelve jurymen and the whole of the evidence taken, and the doctor's defence fully put forward, he obtained a verdict with £200 damages and costs. This must be taken as overriding the verdict of the jury at the inquest, and therefore Mr. Smith must be considered as free from all blame and to have completely vindicated his character. The result of this proceeding, however, is to Mr. Smith a very serious matter. He obtains no redress—not even the damages awarded him by the jury—and will have to pay his own costs of the colonial proceedings, and now, at the end of eight years of anxiety and litigation, he, although acknowledged to be innocent of the charge for which he was dismissed, finds himself, owing to a decision on a purely legal point, a ruined man, and obliged to begin the world again at an advanced age. For these reasons the College would most respectfully request you to take the matter into your careful consideration, so that Mr. Smith may in some way be compensated for all the hardships to which he has been exposed owing to what the President and Fellows cannot but consider as a wrongful dismissal.

"I am, Sir, your obedient servant,
(Signed) "G. P. L. NUGENT, M.D., Fellow and Registrar."

To this communication the subjoined reply was received, and we may note in passing that the courtesy of Mr. Chamberlain's words is enhanced in our eyes by the promptitude of his answer at a time when it is reasonable to suppose that even his talents for organisation have been strained.

"Downing-street, Aug. 8th, 1895.

"SIR,—I am instructed by the Secretary of State for the Colonies to acknowledge the receipt of your letter of the 12th ult., submitting a representation on behalf of Dr. Henry Lionel Smith, a Licentiate of the Royal College of Physicians in Ireland, in connexion with the circumstances in which he was removed in March, 1889, from the temporary charge of the Albany Hospital, Western Australia. I am to state that Mr. Chamberlain, while glad to think that Dr. Smith was able to disprove the professional misconduct in the case of the boy Webb, which was imputed to him in the verdict of the coroner's jury and in the Governor's minute, feels obliged to point out that the doctor's own evidence at the inquest contributed to the view taken by the jury and the Governor. He thinks also that it is to be regretted that Dr. Smith was advised to take legal proceedings in respect of matters which did not afford him a ground of action, and he feels that it is not possible for him to admit that the ultimate reversal of a verdict which should never have been given is ground for awarding Dr. Smith compensation at the expense of the public. I am to add that it would not in any case have been in Mr. Chamberlain's power to grant compensation in a case of this description, as Parliament has not placed at his disposal any funds from which it could be paid.—I am, Sir, your obedient servant,
(Signed) "JOHN BRAMSTON."

We quite understand that direct pecuniary compensation in such cases is always difficult to obtain. A strong Government (in using the word Government we are not alluding to a party, but to the British Constitution) does not make convenient arrangements beforehand, so that the results of mistakes may be obviated, for it does not anticipate making mistakes at all. But there are other methods than by the gift of so much money of showing practical sympathy with the plight of a citizen who has been caught in the cogs of the machinery of the Constitution and been disabled thereby; and we know that any favour shown to Mr. Smith, who has borne his grievous wrongs with the utmost pluck, will be hailed with acclamation by all who know his story. Reinstalment in the service from which he was dismissed would, we can believe, be awkward both to the department and its restored official, but the means at the disposal of Government by which Mr. Smith's case can be generously met are many.

With regard to the words "temporary charge" in Mr. Chamberlain's letter, it has been proved that Mr. Smith was led to believe that when he accepted office he was to hold for life (of course, subject to good behaviour), and he invested his money in his predecessor's practice on that understanding. We have no doubt that Mr. Smith regrets as much as anyone that he has been involved in legal proceedings which have ruined him, and have left him a middle-aged man with children to begin the battle of life over again, penniless and lying under the stigma (for it is no less) of being "a man with a grievance"; but what—what in the name of prudence even—was he to do? He took legal proceedings under the Petition of Right because, having been refused a hearing before the heads of the Medical Department in West Australia and arbitration by the Governor, he was recommended to take this course by his counsel, Mr. Hensman. Mr. Hensman is now a judge in the colony, and with Mr. Chief Justice Onslow (who ruled in Mr. Smith's favour) constitutes the highest legal authority in the colony. If Mr. Smith had declined to take Mr. Hensman's advice and had quietly sat down under a charge of constructive murder founded on the ill-considered verdict—"which should never have been given"—of an ignorant coroner's jury of three persons, would that have been prudent?

Eight years of his life, it is true, have been wasted in fruitless legislation, but at any rate the Secretary of State for the Colonies has admitted in his letter to the ancient corporation of which Mr. Smith is a Member that the charges of misconduct have been disproved, and that the coroner's verdict should not have been given. This is, we can well understand, highly satisfactory to Mr. Smith, but it will not give him back the time that he has wasted in kicking against official pricks, and it will not feed his children.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6518 births and 3884 deaths were registered during the week ending Aug. 17th. The annual rate of mortality in these towns, which had been 20·7 and 20·8 per 1000 in the two preceding weeks, declined again last week to 19·1. In London the rate was equal to 17·3 per 1000, while it averaged 20·4 in the thirty-two large provincial towns. The lowest rates in these towns were 9·1 in Croydon, 10·7 in Birkenhead, 13·3 in Bristol, 13·6 in Huddersfield, and 13·9 in Halifax; the highest rates were 25·5 in Manchester, 26·0 in Salford, 27·7 in Liverpool, 29·2 in Wolverhampton, and 31·0 in Preston. The 3884 deaths included 929 which were referred to the principal zymotic diseases, against 1178 and 1077 in the two preceding weeks; of these, 610 resulted from diarrhœa, 115 from measles, 82 from diphtheria, 48 from whooping-cough, 38 from scarlet fever, 33 from "fever" (principally enteric), and 3 from small-pox. These diseases caused the lowest death-rate in Plymouth, Swansea, Birkenhead, Halifax, and Newcastle-upon-Tyne; and the highest rates in Sheffield, Salford, Hull, Bolton, and Preston. The greatest mortality from measles occurred in Manchester, Salford, Swansea, West Ham, and Blackburn; from whooping-cough in Liverpool and Salford; and from diarrhœa in Norwich, Wolverhampton, Sheffield, Hull, Bolton, and Preston. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 82 deaths from diphtheria included 50 in London, 5 in West Ham, and 3 in Birmingham. Two fatal cases of small-pox were registered in Oldham and 1 in London, but not one in any other of the thirty-three towns. There were 336 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, Aug. 17th, against 199, 257, and 273 at the end of the three preceding weeks; 79 new cases were admitted during the week, against 115, 60, and

54 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2522, against 2347, 2423, and 2511 on the three preceding Saturdays; 357 new cases were admitted during the week, against 249, 247, and 281 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 171 and 159 in the two preceding weeks, further declined to 137 last week, and were 40 below the corrected average. The causes of 57, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Nottingham, Leeds, Newcastle-upon-Tyne, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Salford, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 18·3 to 17·6 per 1000, further fell to 16·6 during the week ending Aug. 17th, and was 2·5 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·6 in Aberdeen, and 15·4 in Glasgow and in Perth, to 20·8 in Dundee and 21·8 in Paisley. The 479 deaths in these towns included 60 which were referred to diarrhœa, 15 to whooping-cough, 7 to scarlet fever, 7 to measles, 6 to "fever," 4 to diphtheria, and not one to small-pox. In all, 99 deaths resulted from these principal zymotic diseases, against 84 and 102 in the two preceding weeks. These 99 deaths were equal to an annual rate of 3·4 per 1000, which was 1·2 below the mean rate last week from the same diseases in the thirty-three large English towns The fatal cases of diarrhœa, which had been 55 and 68 in the two preceding weeks, declined again to 60 last week, of which 31 occurred in Glasgow, 10 in Dundee, 7 in Edinburgh, and 5 in Aberdeen. The 17 deaths referred to whooping-cough were within 2 of the number in the preceding week, and included 9 in Glasgow. The fatal cases of scarlet-fever, which had been 3 and 4 in the two preceding weeks, further rose to 7 last week, of which 5 occurred in Glasgow. The 7 fatal cases of measles showed a slight decline from the numbers recorded in recent weeks, and included 4 in Glasgow and 2 in Paisley. The deaths referred to different forms of "fever," which had been 5 and 4 in the two preceding weeks, rose again to 6 last week, of which 4 occurred in Glasgow, where 2 of the 4 fatal cases of diphtheria were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 77 and 67 in the two preceding weeks, further declined to 57 last week, but slightly exceeded the number in the corresponding week of last year. The causes of 30, or more than 6 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·7 and 22·2 per 1000 in the two preceding weeks, rose again to 24·0 during the week ending Aug. 17th. During the past seven weeks of the current quarter the death-rate in the city has averaged 23·7 per 1000, the rate during the same period being 20·5 in London and 16·1 in Edinburgh. The 161 deaths registered in Dublin during the week under notice showed an increase of 12 upon the number in the preceding week, and included 21 which were referred to the principal zymotic diseases, against 25 and 27 in the two preceding weeks; of these, 16 resulted from diarrhœa, 2 from scarlet fever, 1 from small-pox, 1 from whooping-cough, 1 from "fever," and not one either from measles or diphtheria. These 21 deaths were equal to an annual rate of 3·1 per 1000, the zymotic death-rate during the same period being 3·8 in London and 1·7 in Edinburgh. The fatal cases of diarrhœa, which had been 24, 17, and 23 in the three preceding weeks, declined again to 16 last week. The mortality from whooping-cough corresponded with that recorded in the preceding week, while the mortality from "fever" showed a decline. The 161 deaths in Dublin last week included 36 of infants under one year of age, and 39 of persons aged upwards of sixty years; the deaths of infants were fewer than those recorded in any recent week, while those of elderly persons showed a marked increase upon recent weekly numbers. Four inquest cases and 1 death from violence were registered; and 54, or rather more than a third, of the deaths occurred in public institutions. The causes of 11, or nearly 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-CAPTAIN HICKSON relieved Surgeon-Captain M. P. Holt at Natal on June 27th. He is not in England, as stated in our issue of June 27th.

ARMY MEDICAL STAFF.

Surgeon-Major George M. H. Colman, M.D., retires from the service, receiving a gratuity. The undermentioned Surgeon-Captains to be Surgeon-Majors:—David Bruce, M.B., Edward H. Lynden-Bell, M.B., John Riordan, M.B., Robert H. Firth, F.R.C.S. Eng., Robert H. Moore, M.D., Alan E. Tate, Charles E. Faunce, and Henry J. Wyatt, F.R.C.S.I.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the following promotions among the officers of the Indian Medical Services made by the Government of India:—*Bengal Medical Establishment:* Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels (dated March 29th, 1895): Christopher William Calthrop, M.D., and William Alexander Crawford Roe. Her Majesty has approved of the retirement from the Services of the undermentioned officers:—*Bengal Medical Establishment:* Surgeon-Lieutenant-Colonel James O'Malley McDonnell, M.D. (dated July 29th, 1895). *Madras Medical Establishment:* Surgeon-Lieutenant-Colonel Henry Hyde (dated May 25th, 1895). Surgeon-Major A. E. J. Croly is appointed to act as medical officer on the Staff of the Government of India during the absence of Surgeon-Major H. Martin, M.B. Surgeon-Major W. A. Parker, A.M.S., in charge of the Sanatorium and Station Hospital at Mount Abu, is appointed to the Civil Medical Charge of the Station in addition to his own duties. Surgeon-Colonel D. O'C. Raye, Inspector-General of Civil Hospitals, Punjab, is granted three months' privilege leave. Surgeon-Captain T. W. Shaw, M.B., I.M.S. (Bombay), medical officer of the 1st Regiment, Central India Horse, and of the Western Malwa Political Agency, is granted leave to proceed out of India on private affairs for one year.

NAVAL MEDICAL SERVICE.

Staff-Surgeon P. W. Bassett-Smith to the *Magdala*. Surgeons: H. B. Beatty to the *Bellona* and D'Arcy Harvey to the *Impregnable;* A. F. Harper to the Royal Marines, Plymouth; H. F. D. Stephens, to the *Vivid;* and E. A. Spiller to the Royal Marines, Portsmouth.

YEOMANRY CAVALRY.

Middlesex (Duke of Cambridge's Hussars): Surgeon-Lieutenant Leopold Hudson to be Surgeon-Captain. Shropshire: Surgeon-Captain J. D. Lloyd to be Surgeon-Major.

VOLUNTEER CORPS.

Royal Engineers: 1st Devonshire and Somersetshire: Surgeon-Lieutenant J. Fuller to be Surgeon-Captain.

FIELD-MARSHAL LORD WOLSELEY.

The announcement of Lord Lansdowne in the House of Lords as to the successor to the Duke of Cambridge as military head of the army had been generally anticipated, and has been received, we think, with public satisfaction and confidence. Viscount Wolseley unquestionably had the best claim to the appointment, and it is generally recognised that the Government has made the best selection for the post. Lord Lansdowne was careful to explain that the Government would take time to consider the changes in the organisation of the War Office and the conditions under which the General Officer Commanding-in-Chief—if that is to be Lord Wolseley's new title—was to hold his appointment, and that Lord Wolseley accepted the office subject to those conditions. H.R.H. the Duke of Cambridge retains the Commander-in-Chiefship until Nov. 1st, and will consequently carry out the usual autumn inspections. It is quite possible that we are on the eve of great changes, that the scheme of Lord Hartington's Commission will be much modified, and that many administrative changes and reforms may be introduced in the near future.

THE CASE OF SURGEON-MAJOR CLARENCE SMITH.

This case will be in the recollection of our readers. The officer in question was called upon to resign the service, and from the statement of his case as far as published it seemed to us to be one eminently calling for further inquiry and consideration. We are glad to learn, therefore, that Surgeon-Major Clarence Smith has received a letter from the Madras Government inviting him, on behalf of the Secretary of State, to attend a commission composed of one officer with judicial experience and a military officer, the commission to be neither public nor judicial; Mr. Clegg's letter to be read and Surgeon-Major Smith to be examined on that letter, on his memorial, and on other private letters. It was further stated that Surgeon-Major Smith would be allowed counsel and the right to call witnesses, and the commissioners would exercise a similar right.

THE WAR IN MADAGASCAR.

The soldiers composing the French expedition have had a hard time of it in road-making and clearing the country and in overcoming deficiencies and difficulties of transport and commissariat, notwithstanding that there has been very little fighting. There is a good deal of ineffectiveness from sickness and other causes, amounting, it is even said, to 30 per cent. It is possible, however, that this percentage represents the rate of sickness of certain portions of the force rather than the general sick-rate of the whole force.

THE ARMY MEDICAL SCHOOL, NETLEY.

The *Army and Navy Gazette* of the 17th inst. states that at the recent examination at the Netley Army Medical School four probationers—two for the Army Medical Staff and two for the Indian Medical Service—failed to qualify in one or more of the subjects of instruction, and calls attention to the grave pecuniary loss thereby entailed on the State. If, as stated by our service contemporary, only one-third of the total marks in each subject be necessary to qualify, it seems surprising that four probationers should have failed to pass the examination.

EXPERIMENTS WITH THE LEE-METFORD BULLETS.

Experiments are to be carried out at an ammunition factory in Bengal with five kinds of Lee-Metford bullets in order to test the accuracy of their flight and their ranging power, the ulterior object being to secure a projectile that shall have some "stopping power."

Correspondence.

"Audi alteram partem."

"OVER-OPERATING IN GYNÆCOLOGY."

To the Editors of THE LANCET.

SIRS,—Dr. William Duncan, in THE LANCET of Aug. 10th, says that "a man who has operated on a pyosalpinx or a suppurating ovarian tumour can in a quarter of an hour make it perfectly safe for him to attend a lying-in woman." This seems to me a very quick change, and I would not myself, if I could possibly avoid it, be a party to an arrangement whereby a man should go so quickly from operating on a septic condition in the abdomen to a midwifery case, or—and this is equally, if not more, important—from a case of puerperal fever to an abdominal section. The newly delivered uterus and the peritoneum when exposed by surgical means or by accident are both very prone to contract septic disease, and septic infection is not always easily got rid of even by the use of the most powerful antiseptics. Unfortunately it is not possible for any man in extensive practice, whether obstetric or surgical, altogether and at all times to avoid contact with septic mischief, and the serious question raised by Sir William Priestley is whether it is desirable that the obstetric physician should undertake a kind of work which is not obstetrics and which would multiply his chances of becoming a source of danger to a woman in labour. In reply, Dr. Duncan suggests that the obstetric physician would use antiseptics more diligently if he added abdominal surgery to his obstetric work. This might or might not happen, but if the assumption be granted it does not seem to me to follow that abdominal surgery should become a part of obstetrics. The physician might find in brain surgery an equally strong incentive to cultivate that cleanliness which, if I understand Dr. Duncan aright, is not sufficiently considered by those who practise obstetrics alone.

Dr. Duncan says he agrees with Dr. Herbert Spencer "that it would be a wise and gracious act on the part of the surgeons in every hospital to hand over to the obstetric physicians all the cases of disease of the female generative organs requiring abdominal section." In regard to abdominal surgery, however, if there is anything well ascertained it is the uncertainty of diagnosis, and the immense importance to the patient of the surgeon being ready when he opens the abdomen to deal with any condition he may find, and, perhaps, with a condition very different from that which he expects to find; hence the obstetric physicians could not properly, if they would, stop at the surgery of the female generative organs, and the obvious inference is that they should either confine themselves to obstetrics proper and to the preservation and repair of the generative tracts without opening the abdomen, or that they should undertake to become proficient in the whole range of abdominal surgery. There is a possible distinction between work to be done only through the anterior abdominal wall and that which may be done through the vagina; but there is no possibility of separating in any practical way the abdominal surgery of the female generative organs from the surgery of the abdomen generally.

Dr. Duncan has referred, and evidently with disapproval, to the division of duties at the Samaritan Free Hospital, where the work done through the anterior abdominal wall is in the hands of the surgeons, and the medical and vaginal work is in the hands of the physicians. In my humble opinion some such division is essential in a special hospital for diseases of women. There are rarely any midwifery cases in the Samaritan Free Hospital, but it has been judged wise to keep up the distinction as between those who do midwifery and those who do not. I have already indicated that this distinction is important on account of the liability of the newly delivered uterus and of the exposed peritoneum to septic infection. The distinction is essential in another way as a salutary check on the operating zeal of the surgeons. When Dr. Duncan calls in question Sir William Priestley's view that there is over-operating in gynæcology he overlooks the indisputable examples given, taking absolutely no notice of the more important of them. I do not think that anyone who considers the matter carefully, and knows the facts, will deny the pertinency of Sir William Priestley's remarks, for instance, on the recent "epidemic for the removal of the uterine appendages."

In the Samaritan Free Hospital unnecessary operations of this kind are prevented to a great extent, if not altogether, by the physicians. To me personally (and I presume the experience of my surgical colleagues is similar) it has occasionally happened that I have thought a patient could only be cured by the removal of her appendages, whilst a colleague who does not practise abdominal surgery has, in consultation, held a different opinion; consequently the operation has for a time been abandoned. In some of these cases further observation has proved that an operation was unnecessary, whilst in others it has justified the surgeon's view. But a little delay is better than too great haste in matters of this kind, for whenever there is room for doubt it is rarely an urgent question of life and death.

I consider Sir William Priestley's opinion incontrovertible that in the interests of the patient, and therefore of the institution, all special hospitals for women should "have some physicians who do not operate." Without this provision the patients have not the advantage which all patients should have—namely, that of a consultation in cases of doubt with someone not personally interested in operating. At the present moment this advantage is not available in many—I might say in the majority—of special hospitals for women, and, moreover, it is not available in those general hospitals in which the obstetrician does abdominal surgery. However eminent the men concerned may be, this arrangement is bad in principle and is not in accordance with the best traditions of the profession. It seems to me that in Sir William Priestley's suggestion, already carried out in at least one institution, is to be found the best solution of the difficulty that has arisen—namely, that it is a wise plan to attach a gynæcological surgeon to the obstetric department in every general hospital. In some cases the obstetric physician has so devoted himself to abdominal surgery that it might be well to give him the appointment of special surgeon,

and to elect as obstetrician someone who wishes to practise midwifery alone.

The division of duties at the Samaritan Free Hospital enables that hospital to concentrate its advantages as a school of abdominal surgery in a few hands. The importance of this to every special hospital was prominently brought forward by Mr. Hutchinson in the Address on Surgery to the British Medical Association. He distinguished specialists from special hospitals, remarking that "it is quite possible that the latter may, when the staff is large in proportion to the number of beds, cease to offer the advantages as regards individual experience which they are designed to do." A special hospital which does not offer to its staff superior opportunities for practice, and to its patients superior treatment, is worse than useless.

I am, Sirs, your obedient servant,

Portman-street, W., Aug. 20th, 1895. JOHN D. MALCOLM.

THE PICRIC ACID TEST FOR SUGAR IN THE URINE.

To the Editors of THE LANCET.

SIRS,—In a review with which my book on "The Urine" was recently honoured in one of the quarterly medical journals, I am found fault with for not mentioning that boiling is required to bring out the red colouration on the addition of a solution of picric acid and liquor potassæ in urine containing sugar. Now, the fact is that if a solution of picric acid (about a third) be added, with an equal quantity of liquor potassæ, to urine containing sugar a reddish colouration is produced in the cold. This is undoubtedly intensified on boiling, the fluid assuming a claret colour, which passes on repose and cooling to a deep port-wine colour. What, however, is of more significance, the same results ensue in perfectly normal urine. The reaction is more marked, however, in urine containing an abundance of uric acid. This test, then, is eminently fallacious, and should be discarded for either qualitative or quantitative analysis of sugar in the urine.

I am, Sirs, yours faithfully,

D. CAMPBELL BLACK, M.D.,
Professor of Physiology in Anderson's College Medical School, Glasgow.

Aug. 19th, 1895.

AN IMPOSTOR.

To the Editors of THE LANCET.

SIRS,—It has just come to my knowledge that an unknown person giving an address in Goswell-road, E.C., and writing under the name of Dr. G. R. Saunders, has put himself in communication with old St. Bartholomew's men, stating that he has just returned from New Zealand in distress and asking for pecuniary assistance. I am happy to state that my brother, Dr. G. R. Saunders, is now in New Zealand, and that such an intimation is entirely untrue. I shall be glad to hear from any of the victims of this person.

I am, Sirs, your obedient servant,

FREDERICK W. SAUNDERS, M.B. Cantab.

Chieveley House, near Newbury, Berks, Aug. 20th, 1895.

"SPECIALISM IN MEDICINE."

To the Editors of THE LANCET.

SIRS,—Your correspondent, "A General Practitioner," is, I think, in error when he describes overcharging as if it were the monopoly of specialism. I fear that some general as well as special practitioners are guilty of that crime, though perhaps a specialty lends itself more easily to the felony. In any case it is but a matter of degree in the extent of criminality, and it is greatly to be regretted that practitioners, general and special, are to be found lending themselves to such actions. The general practitioner is aggrieved if the specialist does not charge high fees, and unless he does assumes he seeks to take his patients out of his hands altogether. A solution of the question offers itself, viz., that it be no detriment to the specialist to take moderate fees. And this is probably what will result, that in all cases of difficulty and chronicity, whether among the poorer or the richer classes, the specialist should be consulted. To argue against specialism now is to argue against civilisation. The specialist with special practice must excel. Take one of the simplest of specialties—dentistry. Few departments, if any, are easier to attain a knowledge of, yet what proportion of dental work falls to the lot of the general compared with the special practitioner? There is a division of medicine in which, if in any, the general practitioner should equal the special. Yet in every town of adequate size specialists in midwifery are found. In the more difficult departments the specialisation is more accentuated. The advantage of specialism is that its practitioners have very much greater experience than the general practitioner, and even the general physician or surgeon. For one case of glaucoma, lupus, laryngeal tumour, or nasal polypus, &c., the general man sees, the special will see twenty or fifty or more. In the management of these he must attain to greater and more satisfactory knowledge. General practitioners, as their name implies, are intended to treat the generality of diseases; those which are unusual, tedious, or refractory they would do well to refer to the specialist.

I am, Sirs, yours truly,

Aug. 22nd, 1895. A SPECIALIST.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Corporation and the Mersey and Irwell Joint Committee.

IN THE LANCET of the 17th inst. the relations of the corporation to the joint committee are adverted to, and at the last meeting of the city council Alderman Thompson, chairman of the Rivers Committee, made some remarks on the same subject, saying that "the time had arrived when Manchester ought to be on its dignity as regards the joint committee." The precise bearing of that expression in relation to the pollution of the Irwell by Manchester sewage is not obvious. He alluded to the unpleasant position he had occupied in presiding over that committee (being its vice-chairman) when the Manchester effluent was being denounced, "but now that Sir John Hibbert had been relieved of Parliamentary duties and could take his place as chairman, he (the Alderman) could speak out." The Manchester effluent was said to be bad, but he added that Sir Henry Roscoe, in his report on twenty specimens of effluents from various places, described it as "slightly turbid, containing a little oxide of iron in suspension, and with a slightly tarry smell," while against this the effluents from various residential places were said to have a "sewage smell" and a "putrescent smell." This does not sound very dreadful, but it differs much from the description current some little time since. He went on to say: "Considering the amount of fæcal matter, market refuse, and refuse from dye-works and other places that had to be dealt with in Manchester, he thought they were entitled to praise for the effluent rather than blame." For the moment, perhaps, he did not bear in mind that this is only in part a water-carriage town, and that the market refuse and a good part of that from dye-works are solid, and therefore do not go into the sewers. Some time must elapse before the sewage arrangements of Manchester can be considered perfect, and the corporation cannot at present feel quite happy when the matter is discussed in the joint committee, though great efforts are being made to push on the various works. In the meantime the vice-chairman and his colleagues from the city council must be the victims of contending emotions—on the one side fired with zeal for purity of effluent, and on the other tempted to think that even virtue may be carried to excess. The composition of this joint committee is somewhat complex, but fairly representative of the interests involved. The County Councils of Lancashire and Cheshire send respectively eight and three members, Manchester and Salford six and two, while Bolton, Bury, Oldham, Rochdale, and Stockport send one each. Sir John Hibbert, the chairman of the Lancashire County Council, is also chairman of the Mersey and Irwell and of the Ribble joint committees.

Purchase of Chat Moss.

An important addition to the property of the corporation was announced at the last meeting of the council—viz., the purchase of Chat Moss, with an area of 2500 acres. The cost, *plus* law and other charges, was £147,631 4*s.* 11*d.* This is a large sum for it in these days of diminished land values, but the longer the delay the higher the price would be, so that without doubt the corporation has done wisely in

completing the purchase. The chairman of the Cleansing Committee thought that if there were no enlargement of the city area there would be ample accommodation for dealing with the refuse for fifty years to come. Carrington Moss, on the Cheshire side of the Mersey, is rapidly becoming converted, by the action of Manchester refuse, from an expanse of peat-bog into fertile agricultural land, producing luxuriant crops, and no doubt Chat Moss will gradually undergo the same change. Though Manchester is slowly becoming a watercloset town, many years must pass before the transformation is complete, and in the meantime restoration to the earth of what was originally taken from it ought to be a less wasteful proceeding than carrying fertilising material out to sea, as Salford is doing, and as some consider Manchester will be driven to do.

Bequests to Local Charities.

The sum of £47,000, free of legacy duty, has just been left to various local charities by the late Mr. Wm. Berry. The Royal Infirmary receives £10,000, the Ancoats Hospital and St. Mary's Hospital £5000 each, and £13,000 are divided among nine other hospitals. The total help, therefore, to the medical charities amounts to £33,000. In addition to this £14,000 are left to local philanthropic institutions, £2000 to the National Life-boat Institution, and £1000 each to Mr. Barnardo's Homes and the Society for the Prevention of Cruelty to Children. Mr. Berry was what is called a self-made man, having had no advantages of education or capital. His business career began by his making blacking on a small scale, with his own hands, and then taking it about to sell as he could. By industry, honesty, and the possession of the commercial aptitude found sometimes to a remarkable degree in men not otherwise intellectually distinguished, he gradually prospered and acquired a fortune nearly, if not quite, reaching half a million. He was a kindly, unostentatious man, who by reading had acquired a good deal of information, more or less perfectly assimilated, and it may be said to his credit that he never pretended to be other than one raised from the ranks.

Manchester Museum, Owens College.

The question of aid to the above museum came up at the last meeting of the council. The library committee recommended that a grant of £400 per annum be made, on condition that the Lancashire and Cheshire County Councils and the local district councils gave £800 a year. As an amendment it was proposed that the £400 should in any case be given. After some discussion it was decided to postpone the further consideration of the question till the members of the council had had the opportunity of seeing the museum. On Thursday and yesterday, therefore, they visited the College and were received by Mr. Edward Donner, chairman of the museum committee, Mr. Henry Wild, F.R.S., Mr. Thomas Ashton, LL.D., Mr. J. Cosmo Melvill, Dr. Leech, Professor Boyd Dawkins, and other gentlemen. Dr. Leech pointed out the importance of the museum to the public in several respects. It was, he said, a teaching museum, and not a mere agglomeration of curios. Lecturers from the whole of the city and the surrounding districts were accustomed to send their classes to verify by observation what they had been taught. Insects and other animals were brought to the museum that it might be ascertained whether they were likely to be harmful to cotton, wood, or crops. Associations concerned with self-education and literary and scientific societies came for entertainment and instruction. Much interest is also, in this district of coal mines, taken in the geological collection, so valuable in relation to the geology of the coal measures. Dr. Leech very properly emphasised the fact—not known as it should be—that the museum is open to the public every day without charge. The members of the council were very favourably impressed by what they saw and heard, and it is to be hoped that the corporation will come to the help of an institution so valuable to the city.

Death after Vaccination.

An inquest was held last week touching the death of a child said to have been due to vaccination. The mother said that up to the age of eleven weeks the child was healthy. "It"—the sex not being named—was then, June 12th, vaccinated from another child, together with six other infants. Nine days afterwards it had a "gathering" in the right ear and a sore on the foot. On July 8th it got worse, and the gentleman by whom it had been vaccinated prescribed for it. Another gentleman attended it for five weeks, but it got worse. There were running sores on the back of the head, side, and legs. After this a third medical man treated it until Aug. 11th, when it died, and he gave a certificate of death from blood poisoning. Mr. Jones, the public vaccinator for the Openshaw district, said he vaccinated the child, which was healthy, with lymph from another healthy child. In answer to the coroner he said "we have to vaccinate from arm to arm." The Government supplied lymph perhaps once in six months. The coroner said: "If there is to be compulsory vaccination it is the duty of the Government to supply lymph," and that he would not have his child vaccinated from another. Mr. J. Collier, F.R.C.S.Eng., who made a necropsy, said there were extensive ulcerations in various parts of the body. "The lungs were congested and there were signs about the heart and other internal organs of death from blood poisoning, which was, in fact, the cause of death. There were no signs of syphilis. ..... He was of opinion that something not medically clean had touched the wound and set up blood poisoning. He had seen the child from which the deceased was vaccinated and it was perfectly healthy." In reply to the jury, he said "vaccination was the indirect cause of the child's death, but some germ had got into the blood afterwards." Mr. Martin, medical officer of health for Gorton, said that when the child was brought to him it was suffering from general blood poisoning, not from syphilis. The disease had been communicated after vaccination. It is satisfactory to find that the jury returned a verdict to the effect that the child's death was due to blood poisoning following, but not due to, vaccination, and that no blame attached to Mr. Jones. As the *Manchester Courier* says: "Openshaw has been within an ace of furnishing anti-vaccinators with a trump card." It thinks it a pity that calf lymph is not supplied by the Government, and asks, "Why should public vaccinators be required to use a species of lymph which is under suspicion?"

Aug. 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Proposed Edinburgh City Hospital.

As I have already mentioned, the authorities in Edinburgh desire to erect a temporary hospital within a district which is under the Leith town council as governors of Trinity Hospital. The adjourned petition came up before the Leith Dean of Guild Court on Monday last. The Provost of Leith was in the chair, and he at once made a statement condemning and opposing the scheme, and pointing out that they had power to prevent the hospital being placed on the proposed site. The proceedings were somewhat animated and a tone of irritation ran through them. Leith is at present very sensitive and jealous of its big neighbour, for it evidently dreads absorption, and it knows that the most powerful lever for such a step is the advantage it might be to the public health. The application was almost precipitately hustled out of court.

The Holiday Season in Edinburgh.

Comparatively few of the senior members of the Royal Infirmary staff are in town at present, the work at the infirmary being largely done by the assistant staff of physicians and surgeons. Edinburgh as a city is so wholly given over to holiday-making that private practice is nearly at a standstill this month.

Professor Annandale.

Professor Annandale's numerous friends will be pleased to know that he is recovering. He has had a trying illness, and he has been much missed from his place in the lecture-room and the wards during the past months, but it is hoped and expected that the opening of the winter session will see him at his old post with his accustomed vigour.

Arbroath Infirmary.

At a meeting of the directors of the Arbroath Infirmary held this week the Arbroath local authority and the Arbroath district committee of the county council made a proposal that the infirmary should take charge of the epidemic hospital. The directors asked that each of the local authorities should pay £35 a year in addition to the charge for the patients. The local authorities declined these terms, so the proposal was abandoned.

Aberdeen University: the New Buildings at Marischal College.

The Mitchell block and other works at Marischal College are being pushed on apace, in order that the inauguration celebration in October may take place in a finished and splendid building. A grant was made at the last meeting of the University Court to enable alterations to be effected in the entrance and main staircase, and there new and rich decorations are being carried out. Inside the Graduation Hall the handsome design is already appearing through the mass of scaffolding. The granite tracery is completed and the stained glass windows now show clearly the arms and portraiture of men distinguished in the annals of the University. The erstwhile students' reading-room and the Wilson Museum are being largely transformed. Direct access can now be had to the tower without passing through the reading-room. Visitors can now ascend to the upper platform of the tower, a considerable distance above the "clock platform," and from this point a most commanding view of the city and neighbourhood is obtained. The inaugural celebration will take place on Oct. 22nd, 23rd, 24th, and 25th, and the following are the arrangements as regards academic costume. 1. Former graduates may appear either in plain dress or in the appropriate costume indicative of their faculty—viz., black gown and the special hood of their degree. In the case of doctors, whether of law, divinity, or medicine, it is optional to wear the black gown and distinctive hood, or to appear in the full-dress robe of doctors now sanctioned for important occasions, consisting of a scarlet gown with facings of the same silk as that which indicates in the hood the degree. In the latter case the separate hood is not required. 2. Graduates who are to receive the honorary degree in laws or in divinity may appear either in black gown and be invested with the appropriate hood after the capping, or in plain forenoon dress, and be invested with the full academic dress of doctors—viz., scarlet robe with distinctive silk facings. In either case the hood or robe will be provided beforehand by the recipient of the degree.

Aberdeen University: the New Appeal to the Public for Contributions for the Completion of the Extension Scheme.

The executive committee have decided to circulate a statement dealing with the financial aspect of the scheme, more or less historically and indicating the probable cost of the remaining portion of the scheme. The remaining works consist of the tower at the extremity of the north wing, the south wing and corresponding tower, central block, front railings and gates, ventilation, fittings, and the alteration of old buildings and agricultural department. The total estimated cost of these, including architect's fees &c. and the present deficiency on sites, works contracted for, &c., is £41,322.

Aberdeen University: Donation by a distinguished Medical Graduate.

Dr. Thomas Irvine Rowell, C.M.G., late principal civil medical officer to the Government of the Straits Settlements and formerly President of the Municipality of Singapore, has contributed the sum of £100 towards the extension fund. The letter intimating the subscription was addressed to his cousin, the Lord Provost of Aberdeen. It expressed the hope that the citizens and graduates would be stimulated and inspired by Dr. Mitchell's munificence to place the University Court in funds sufficient to complete the scheme. The publication of the letter in the Aberdeen papers has given somewhat of a fillip to the fund; but the Court still require £40,000, and a fresh appeal for subscriptions is to be issued. Dr. Rowell when a youth was first bursar at King's College, Aberdeen.

New Convalescent Hospital at Aberdeen.

The difficulties of the directors of the Royal Infirmary in procuring a suitable site are now over. They have found four acres of ground at Hillhead of Pitfodels, about four miles from the General Post Office. The site is near the high service reservoir, and arrangements have been made for laying pipes and obtaining water from the city supply. The ground lies high, but the exposure is good, and the one and a half acres of wood which will be included will afford a sheltered airing ground in hot weather.

Aberdeen Nursing Association.

It is hoped that a member of the Royal Family will open the forthcoming bazaar, the object of which is to provide funds for the alterations on the new home for the nurses and for other purposes of the association.

Aberdeen: Health of the City.

The following is the return of zymotic diseases notified to the medical officer of health for last week: Measles, 2; scarlet fever, 9; diphtheria, 1; typhoid fever, 2; whooping-cough, 32; erysipelas, 5; cholera infantum, 1; total cases, 52, being 24 fewer than in the preceding week.

Aug. 21st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Health of Dublin.

IN view of the very large influx of visitors to Dublin for the coming Horse Show, to commence on the 27th inst., it is satisfactory to note that the recent reports of the Public Health Committee show the condition of the city and surrounding districts to be more than usually salubrious. Small-pox as an epidemic has practically disappeared, and there has recently been a marked decline in the reduced number of cases in hospital. The Registrar-General's recent report of the Pembroke district, in which the Royal Dublin Society's exhibition will be held, is most satisfactory and compares favourably with similar districts such as Rathmines, Kingstown, &c.

Poisoning in St. Stephen's Green.

Three children were admitted to Mercer's Hospital on the 13th inst. suffering from irritant poisoning caused by their having eaten some berries from a laburnum tree growing in St. Stephen's Green. But for the promptitude with which they were brought for treatment the consequences might have been fatal to one or all of them. They have now been discharged well, but their case is one of the many recorded in which virulently poisonous but ornamental plants growing in public gardens have caused serious danger. Among the commonest of these is the deadly nightshade (Atropa belladonna) and the English laburnum (Cytisus laburnum), and monkshood (Aconitum napellus).

Double Distal Ligature for Innominate Aneurysm.

A man aged forty-nine, suffering from a large and thin-walled innominate aneurysm which had produced dislocation forwards of the right clavicle, and which had defied the usual medical measures of treatment—viz., prolonged rest, iodide of potassium, &c.—is now under surgical treatment at the Mater Misericordiæ Hospital. His right subclavian and common carotid arteries were simultaneously ligatured three weeks ago, and both wounds have long since closed *per primam*. Consolidation has not, however, taken place in the aneurysm, but its pulsation has become much less strong, while its walls have become thickened by fibrinous deposit. The arteries of the patient's right arm are, moreover, pulseless. The distal operation for innominate aneurysm, which the writings of Mr. Barwell of London have done so much to popularise with surgeons, has been performed on three occasions only in Dublin—once by Mr. Conway Dwyer of Jervis-street Hospital and twice by Mr. Coppinger of the Mater Misericordiæ Hospital. The first two patients are now well and apparently cured of their disease, while the last, the most serious of the three, promises fairly.

Richmond District Lunatic Asylum.

A serious irregularity seems to have taken place recently at this institution during the absence on leave of the resident medical superintendent. According to the reports in the public papers, the body of a patient was left, owing to the neglect of some of the attendants, uninterred for nine days.

The Battle of the Clubs at Cork.

The Mayor has communicated with the profession in Cork requesting them to send six representatives to meet a similar number of delegates from the clubs for the purpose of discussing the questions in dispute with a view to arranging a compromise if possible, a result that the Mayor is particularly anxious should be arrived at. Accordingly the following gentlemen were selected to meet the Mayor and the club delegates—Dr. Hobart, Dr. E. Townsend, Dr. Corby, Dr. Magner, Dr. Giusani, and Mr. Lee. The first meeting was held in the municipal buildings, and lasted two hours. Though each side was to be at liberty to communicate with the bodies they represented, one of the club delegates suggested that no information should be given to the press except a brief statement by the Mayor. The Mayor observed his part of the compact

but a leading article appeared the following morning in a daily paper commenting on the conference in a manner which the profession considers unfair. A second meeting was held on Friday last, and an important decision arrived at. The club delegates announced that no arrangement could be come to unless the profession at Cork would undertake to meet in consultation the three medical men who since the commencement of the dispute have been acting for the clubs. The medical delegates replied that it would be quite impossible to accept such terms. They pointed out that the Cork medical men had made only fair and reasonable demands, and had only done so when they found medical practice in the city was being ruined by the club system, that the three medical men referred to had done all in their power to resist the demands of the profession, and under the circumstances the medical practitioners of Cork could not regard them as professional brethren. The fact was also emphasized that there are only five clubs vacant at present; that the three imported men hold the remainder, constituting the majority of the clubs; that the suggestion of the club delegates, if acted on, would mean that facilities should be given to those three men to remain in possession of the appointments which were resigned by the Cork medical men as a protest against the action of the clubs; and that the original club medical officers would be thereby precluded from ever getting back those appointments. The medical delegates considered it quite unnecessary to refer to the general body of the profession a proposition which would imply such a base betrayal of many of their colleagues. The Mayor then said he would request the three imported medical men to have an interview with him, and he would ascertain from them whether for purpose of facilitating a compromise they would be prepared to leave the city. To-day (Wednesday), at a further conference, the Mayor stated that the three imported medical men were not disposed to fall in with those views, and that they would not agree to any terms which would not imply their recognition by the Cork profession. The Mayor expressed great regret that his efforts to bring about a friendly understanding between the Cork profession and the clubs had not been more successful. The assembled delegates passed a vote of thanks to the Mayor, and the proceedings terminated. Acts, not words, has been the motto of the Cork medical practitioners, and though all the correspondence and speech-making have been the undisputed prerogatives of the clubs it is notable how steadily public opinion has veered round to regard with favour the claims put forward by the Cork profession. As an instance I may mention that early last week, when the Mayor's conference was first proposed, one of the local papers which previously could discover no redeeming feature in the opposition of the medical men to the encroachments of the clubs, published in a leading article the following sentiments: "It is easy to understand that when clubs combine to be granted lower fees than the members would be charged individually, the unfortunate practitioner may find that with very much more than an eight hours' day to work a 'living wage' could not be earned. ..... Each side will be the gainer by a fair settlement, and, dealing as we are with honourable and intelligent men, we are practically certain that the result of the present negotiations will be in all respects satisfactory."

The Legal Proceedings by a Member of a Cork Club for Sick Pay.

After a patient hearing the magistrates unanimously decided on giving a decree against the secretary of the Irish National Foresters for the full amount of sick pay claimed by Mr. Carroll, one of their members. I sent you a brief account of the case in my notes last week. Mr. Blake, solicitor for the secretary, asked to have a case stated for the superior courts. Mr. Healy, solicitor for the plaintiff, complained of the hardship of compelling his client to fight the case in the superior courts. It was eventually decided that the case should be brought on appeal before the Recorder. In the course of the proceedings one of the medical men imported by the Cork clubs was made to admit that he possessed no medical qualification; but it is difficult to see how this fact was relevant to the case.

The Belfast Union.

The half-yearly report of Mr. Agnew, Local Government Board inspector, on the Belfast Union has just been published. He thinks the condition of the separation department requires the urgent attention of the guardians, in order not only that more room may be afforded to the mothers and their children, but also that persons suffering from venereal disease may be removed therefrom and be afforded separate accommodation. He recommends that the sewer at the north end of the premises, which still constitutes a nuisance, should be done away with forthwith by the corporation. He recommends also that steps should be taken to put the yards into proper order and that some efforts should be made to have the boys taught handicrafts. The number of inmates classified as insane was on the day of the inspector's visit 439, and for their accommodation the guardians have provided a large and commodious detached building at a cost of £14,000, and they are, in addition, now expending a sum of almost £2000 in providing apartments for the resident medical officer, nurses, and warders, and also increased dining-hall accommodation, together with additional and improved baths, lavatories, and closets. The inspector recommends the appropriation of a portion of the adjoining ground as a recreation place. The report is favourable to the Belfast Union. In reference to the Fever Hospital, the inspector states that the accommodation is ample, and the nursing, dietary, sanitation, and ventilation are satisfactory.

Science Research Scholarship.

On the recommendation of the Council of Queen's College, Belfast, Mr. William Hanna, M.A., M.B., has been appointed by Her Majesty's Commissioners for the Exhibition of 1851 to a Science Research Scholarship for the year 1895. The exhibition is of the value of £150 and is tenable for two years.

The Proposed Asylum at Purdysburn.

At the monthly meeting of the board of governors of the Belfast Asylum, held on Aug. 12th, in reply to some questions Dr. Merrick, the medical superintendent, stated that the Board of Control considered that Purdysburn would be a better place than Belfast for acute cases, while the governors were agreed that they should keep Belfast as a going concern and send chronic cases to Purdysburn. There would seem to be considerable difference of opinion as to the extent of building to be erected at Purdysburn, and this probably arises from the constitution of the board. Some of the governors are appointed by the Lord Lieutenant, some by the grand jury of county Antrim, and some by the Belfast corporation, while the united body of governors have to act in conjunction with the Board of Control in Dublin. The question of the probable expense of the new asylum is a most important element. Some of the governors thought a building to accommodate, as a hospital, 250 patients would be sufficient, while others were in favour of erecting a complete asylum for between 800 and 1000 inmates. The Board of Control in Dublin approved of the latter plan, and accordingly a resolution was passed at a previous meeting that architects are to be invited to send in designs and specifications for a large and complete building to accommodate 800 patients, and prizes of £100, £75, and £50 are to be given to the designs awarded first, second, and third places. At the meeting on Aug. 12th some of the governors again raised the question that they were not pulling in exact harmony with the city corporation, who had expressed the opinion that they would not build a complete hospital by getting plans which only indicated that they wanted a complete asylum. A prolonged discussion ensued, in which the feeling of the governors was that, when the ratepayers were consulted through the city corporation, two schemes should be submitted: first, a plan for a small building to accommodate, say, 250 patients; and, secondly, a design for a complete asylum, with the full cost and advantages of each plan. Ultimately the following resolution, moved by Mr. Harrison, B.L. (a member of the city corporation), and seconded by Professor Cuming, M.D., was passed unanimously: "That the Board of Control be informed that it was the intention and the desire of the board of governors that separate plans be furnished for a detached asylum building for chronic cases, capable of holding at present 250 patients, and of afterwards being used as an acute hospital."

Garvagh Dispensary

At a special meeting of the Garvagh Dispensary committee Dr. Adams was unanimously appointed medical officer of the district in succession to Dr. McNeary (resigned), and it was also agreed to recommend the Coleraine board of guardians to fix the salary at £115 per annum.

Rabies in the Downpatrick District.

At the weekly meeting of the Downpatrick board of guardians, held on Aug. 17th, a letter was read from the veterinary department, Dublin, regretting that the guardians had declined to make regulations for the muzzling of dogs in the union, and again enjoining upon them, in view of the continued recurrence of rabies, to exercise the powers conferred upon them by Article 10 of the Rabies Order of this year. The guardians, however, declined to take action, one of them, Lord de Ros, alone dissenting.

The Consumption Hospital, Belfast.

One of the Belfast merchant princes, Mr. Forster Green, a member of the Society of Friends, has purchased, at the cost of several thousand pounds, Fortbreda, a most beautiful residence with commodious grounds in an elevated position in one of the most healthy districts in Belfast, and intends to present it to the committee of the Hospital for Consumption in Belfast. It will be an admirable place for the purpose. This is only one of very many acts of charity done by Mr. Forster Green.

Aug. 20th.

Obituary.

GEORGE STEELE, M.B., C.M. GLASG.

INTELLIGENCE, energy, and amiability, combined with sound professional attainments and a consuming love of his fellow man—such were the characteristics of this young missionary explorer, who succumbed to fever in Ngoniland on June 24th. Dr. George Steele was born in the Bridgetown Division of Glasgow, and, with a view to the practice of medicine, studied at the University, and in due course graduated M.B., C.M. Shortly thereafter he resolved to devote his abilities and acquirements to the moral reclamation of the savage tribes of Central Africa and, strongly aided in his resolve by the Edinburgh promoters of medical missions—conspicuous among whom may be mentioned his friend, Mr. John James Cowan—he placed his services at the disposal of the Livingstonia Committee of the Free Church of Scotland, who, six years ago, sent him to assist Dr. Elmslie of Aberdeen in reclaiming the warrior Zulus to civilisation. Such interest had he inspired in his undertaking that the many friends whom he had made in his academic and post-graduate days assembled *en masse* at the Central Railway Station to see him off and bid him God-speed. Arrived at his destination, his first post was in the Ngoni country, a healthy plateau occupied by the tribe of that name above Bandawé on the western shore of Lake Nyassa. In this region he lived and laboured, doing solid and even brilliant work for many a "noble savage," till the regulation period before furlough found him much in need of rest and change. This well-earned holiday was to have begun on May-day of the present year, but, from causes not yet explained, he postponed his departure. A missionary tour in Australia, devised to arouse colonial interest in Central African work, with a subsequent visit to Scotland in contemplation, was his programme. But it was destined never to be carried out. His much-tried constitution failed to rally under his latest febrile seizure, and, as announced by telegram, he died on June 24th.

Scotland, from Mungo Park downwards, has been honourably distinguished through her medical sons in the field of African exploration, and the great career of David Livingstone has proved to many a young compatriot a powerful incentive to "go and do likewise." Dr. Steele was one of these, and the fate that befel him has been but too typical of what awaits the "missionary hero" in the Dark Continent. Shortly before him, there died in the same region and under similar circumstances Mr. Monteith Fotheringham, to whose ability and energy the African Lakes Corporation is so deeply indebted. Life in the more salubrious uplands in his case, as in Dr. Steele's, was all too inadequate to countervail the fevers contracted on visits, however occasional, to the lower levels around Lake Nyassa and the valleys of Shiré and Zambesi. Five years' residence, even in the healthier hill country, is as much, indeed, as has been found compatible with safety, and so the Livingstonia Committee has made it a rule that its emissaries may go on furlough after their first three years of work. But prudence has seldom a place in the vocabulary of the missionary enthusiast, and so Dr. Steele's exemplar must be added to many others among his profession and vocation, of the self-sacrifice that knows no fear and of the love that is stronger than death.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Kurt Schimmelbusch, for many years assistant to Professor Bergmann in the Berlin Surgical Clinic, after a month's illness, at the age of thirty-five. At the conclusion of his student's course he acted for a time as assistant to Professor Eberth of Halle, with whom he carried out various anatomical, pathological, and bacteriological researches, the best known of which were upon thrombosis and embolism. Afterwards he decided to devote himself to surgery, and became assistant to Dr. Bardenheurer in Cologne, later going to Berlin, where he was looked upon as one of the most rising surgeons of the day.—Dr. Felix Hoppe-Seyler, Professor of Physiological Chemistry in the University of Strasburg, at the age of seventy, from an apoplectic attack, at his summer residence on the Bodensee.

AUSTRALASIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The seventh session of the above association will be held in Sydney from Jan. 3rd to 10th, 1896, under the Presidency of A. Liversidge, M.A., F.R.S., Professor of Chemistry, University of Sydney. The Presidents and Secretaries of the Sections are as follows:—*Astronomy, Mathematics, and Physics:* R. L. J. Ellery, C.M.G., F.R.S., Government Astronomer, Victoria, President; R. Threlfall, M.A., Professor of Physics, and J. Arthur Pollock, B.Sc., Demonstrator in Physics, Sydney University, Secretaries. *Chemistry:* T. C. Cloud, A.R.S.M., F.C.S., Manager, Wallaroo Copper Works, South Australia, President; W. M. Hamlet, F.C.S., F.I.C., Government Analyst, New South Wales, Secretary. *Geology and Mineralogy:* Captain F. W. Hutton, M.A., F.R.S., F.G.S., Director of Canterbury Museum and Lecturer in Geology, Christ Church, New Zealand, President; T. W. E. David, B.A., F.G.S., Professor of Geology and Physical Geography, Sydney University, and E. F. Pittman, A.R.S.M., F.G.S., L.S., Government Geologist, New South Wales, and Lecturer in Mining, Sydney University, Secretaries. *Biology:* T. J. Parker, B.Sc., F.R.S., Professor of Biology, Otago University, Dunedin, New Zealand, President; W. A. Haswell, M.A., D.Sc., F.L.S., Professor of Biology, Sydney University, and J. H. Maiden, F.C.S., F.L.S., Curator, Technological Museum, Sydney, and Superintendent of Technical Education, New South Wales, Secretaries. *Geography:* H. S. W. Crummer, Secretary of the Royal Geographical Society of Australasia, New South Wales Branch, Secretary. *Ethnology and Anthropology:* A. W. Howitt, F.G.S., Secretary for Mines, Victoria, President; John Fraser, B.A., LL.D., Sydney, Secretary. *Economic Science and Agriculture:* R. M. Johnston, F.L.S., Government Statistician, Tasmania, President; Walter Scott, M.A., Professor of Greek, Sydney University, and F. B. Guthrie, F.C.S., Consulting Chemist to the Department of Agriculture, New South Wales, Secretaries. *Engineering and Architecture:* H. C. Stanley, M.I.C.E., Chief Engineer, Southern and Western Railway Lines, Queensland, President; J. W. Grimshaw, M.I.C.E., M.I.M.E., &c., Supervising Engineer, Harbours and Rivers Department, New South Wales, Secretary. *Sanitary Science and Hygiene:* Hon. Allan Campbell, M.L.C., L.R.C.P., South Australia, President; J. Ashburton Thompson, M.D., Chief Medical Inspector, Board of Health, New South Wales, Secretary. *Mental Science and Education:* John Shirley, B.Sc., District Inspector of Schools, Brisbane, Queensland, President; Francis Anderson, M.A., Professor of Logic and Mental Philosophy, Sydney University, Secretary. Communications and papers for the meeting, or inquiries, may be addressed to the Permanent Honorary Secretary, the Chemical Laboratory, the University, Sydney, New South Wales.

THE

BRITISH MEDICAL ASSOCIATION.

MEETING IN LONDON.

THE SECTIONS.

PUBLIC MEDICINE.

THURSDAY, AUG. 1ST.

The Prevention of Milk Epidemics.

Dr. KENWOOD, medical officer of health of Stoke Newington and Finchley, opened a discussion on this subject. By means of a circular note addressed to all the medical officers of health of areas situated within the metropolis and the home counties of Middlesex, Surrey, Essex, Kent, Hertfordshire, Buckinghamshire, and Berkshire, he had collected the facts in reference to those milk epidemics that had had their origin in diseased cows in the years 1893 and 1894. In each of his two districts (Stoke Newington and Finchley) there had been such an epidemic during the past year, and it was abundantly clear in both cases that the community was practically unprotected from such visitations; indeed, a sufficient answer to those who might contend that the steps taken at the present day were satisfactory was found in the reply that such outbreaks were not prevented, that they occurred in large numbers in this country, and that they showed a tendency to increase. It was high time, with these epidemics constantly cropping up, that something more should be done to prevent their recurrence. Practically, present action was restricted to preventing the further spread of the outbreak after it had already worked a varying amount of harm, but it was easily practicable to proceed upon lines of true prevention that would aim at removing the possibility of future outbreak. The necessity for further steps was a growing one for the reasons: 1. That the cowkeepers were becoming less and less generally the milk retailers, and they were not, therefore, affected to anything like the same extent as the latter by the consequences of a milk epidemic; moreover, cowkeepers did not (and, it seemed, would not) recognise the necessity of excluding the milk of cows suffering from those transitory, often slight, and generally obscure ailments that might furnish an infective quality to the milk. 2. The establishment of large companies with large and irregular areas of distribution was gradually displacing the man with a small and circumscribed area to supply, and the result was a much greater difficulty in tracing the origin of a milk epidemic. He then proceeded to discuss the powers that had been granted to local authorities and the reasons of their failure. Careful examination of all milch cows at short intervals, preferably once a week, the prompt isolation of those animals likely to furnish infective milk, and the adoption of means that would deter the cowkeeper from mixing the milk of such animals with other milk were, in his opinion, the only ways of dealing with the difficulty. He then dwelt on the necessity for the appointment of special inspectors of cows and cowsheds, discussed the qualifications of such inspectors, and recommended their appointment in some cases by neighbouring authorities in combination. The necessity for such inspectors to notify at once all cases of suspicious disease in cows to the medical officer of health was pointed out. The conditions in cows which might render their milk noxious to human beings were enumerated, and the symptoms that would warrant the inspector in requiring isolation were stated. Suggested rules for the guidance of such inspectors were given.

Brigade-Surgeon-Lieutenant-Colonel PRINGLE said he believed a great deal of the mischief with regard to milk contamination was due to the state of the places where it was retailed. Some shopkeepers who kept milk also sold cheese, bacon, and other things, and in many cases these commodities were in a varying state of decomposition.

Dr. BOND said he had never been able to directly trace a case of outbreak of disease to contaminated milk in his district. At the same time he heartily agreed with Dr. Kenwood's scheme, if practicable, but he thought there would be considerable difficulty in carrying it out.

Vital Statistics of Diphtheria in London, 1891–95.

Dr. F. A. DIXEY, Fellow of Wadham College, Oxford, read an interesting paper on this subject. He said:—The remarkable rise in the number of deaths attributed to diphtheria during the last few years in London has attracted much attention and has given occasion to many valuable memoirs which have largely increased our knowledge of the subject. In the course of the following remarks I propose to examine the recent progress of the disease in London from the statistical side, making chief use of the information contained in the weekly returns of the Registrar-General.

1. *The general course of diphtheria in London, 1891–95.*—The history of fatal diphtheria in London since the beginning of 1891 is shown in Table I., which gives for each week the actual number of deaths returned as due to "diphtheria," together with the average number of deaths attributed to the same cause for the corresponding week of the last ten years, corrected for increase of population.

TABLE I.—*London, 1891–95: Weekly Deaths from Diphtheria, with Corrected Means for Ten Years of the Corresponding Weeks.*

Weeks.	1891.		1892.		1893.		1894.		1895.	
	Deaths.	Corrected mean (10 years).	Deaths.	Corrected mean (10 years).	Deaths.	Corrected mean (10 years).	Deaths.	Corrected mean (10 years).	Deaths.	Corrected mean (10 years).
January: 1	28	22·9	25	24·0	47	25·2	66	28·0	50	33·2
2	23	18·8	29	19·3	61	20·9	55	25·9	34	30·1
3	17	19·8	23	20.1	37	20·7	48	23·2	31	26·6
4	25	21·4	24	22·5	53	23·5	52	26·6	29	30·4
February: 5	34	23·2	27	24·8	43	25·7	74	28·2	45	33·4
6	29	22·4	18	22·9	62	23·1	56	28·2	34	32·0
7	34	20·2	15	22·1	60	23·0	58	27·9	27	31·2
8	32	20·4	30	22·3	51	24·1	42	27·5	29	30·5
March: 9	31	15·0	27	20·7	37	22·1	59	24·6	31	29·6
10	18	19·9	34	16·4	38	18·4	53	21·1	34	25·4
11	33	19·5	31	21·4	65	23·3	52	28·3	27	32·4
12	26	17·2	30	18·7	49	19·8	56	23·5	24	28·0
13	24	17·9	15	18·8	36	17·3	57	19·8	31	24·6
April: 14	26	18·9	34	19·8	38	21·2	63	23·1	23	28·3
15	26	22·8	33	23·9	44	24·4	50	26·9	27	30·4
16	23	16·9	29	17·7	47	18·8	53	21·7	30	25·4
17	24	19·5	17	20·7	50	21·0	63	24·2	27	28·9
May: 18	24	17·2	31	18·2	54	19·9	58	24·0	29	28·9
19	19	17·6	24	17·3	68	18·5	55	24·3	38	29·3
20	21	16·8	41	17·5	51	20·7	56	24·3	41	29·0
21	27	17·8	39	19·8	41	22·6	41	25·4	37	27·8
June: 22	24	17·9	40	19·5	51	22·5	36	26·1	41	27·5
23	21	19·0	37	20·1	39	22·1	34	23·9	33	25·8
24	28	19·5	34	20·4	62	22·9	43	27·9	45	29·9
25	31	17·3	39	19·1	68	21·2	44	27·1	37	30·6
26	18	17·9	38	17·9	64	20·7	56	25·9	38	29·7
July: 27	21	18·9	30	20·3	54	21·7	43	26·2	—	—
28	25	18·3	43	20·2	51	23·8	45	26·6	—	—
29	26	18·3	37	20·1	66	22·6	36	27·3	—	—
30	30	21·4	25	22·7	72	24·4	52	30·6	—	—
August: 31	24	19·7	42	21·8	64	24·7	57	29·8	—	—
32	22	20·5	35	21·5	63	23·2	62	27·7	—	—
33	24	17·9	37	19·5	63	21·6	57	27·3	—	—
34	24	21·5	38	22·4	56	24·5	43	28·4	—	—
September: 35	24	19·9	34	21·6	56	23·3	33	27·2	—	—
36	17	19·9	37	20·3	65	22·4	39	27·8	—	—
37	32	21·8	36	24·6	65	26·0	55	30·6	—	—
38	29	24·8	43	26·4	88	29·1	52	35·7	—	—
39	32	26·0	50	28·1	96	30·4	67	38·5	—	—
October: 40	29	26·3	51	28·1	74	31·1	66	36·9	—	—
41	25	25·4	46	26·7	86	28·8	54	35·4	—	—
42	29	29·6	41	30·4	84	31·8	61	37·7	—	—
43	31	24·4	56	24·9	83	30·0	49	36·5	—	—
November: 44	25	21·4	47	22·7	88	28·3	54	34·2	—	—
45	24	30·2	51	28·3	103	31·7	42	40·2	—	—
46	30	27·4	29	29·0	91	29·9	44	36·8	—	—
47	26	29·2	46	29·2	90	32·4	48	39·7	—	—
December: 48	27	26·8	39	27·4	74	29·7	54	34·5	—	—
49	33	29·7	58	30·5	89	34·5	57	41·5	—	—
50	30	26·9	59	28·8	85	33·7	53	40·1	—	—
51	20	24·4	60	24·5	63	29·5	36	34·4	—	—
52	37	23·1	50	25·1	79	29·1	35	35·1	—	—
Weekly mean for whole year	26·2	—	36·2	—	62·8	—	51·4	—	33·5	—

It will be seen that the number of deaths, though somewhat above the average for the greater part of 1891, had towards the end of the year sunk almost to the normal level. Soon after the beginning of 1892, however, a gradual rise takes place, which, with some considerable fluctuations, is, on the whole, steadily maintained throughout 1892 and 1893, until it culminates in the second week of November in the latter year, when the deaths attributed to diphtheria reached the unexampled total of 103. From this point a descent begins, at first rapid, afterwards more gradual, until finally, in the closing week of 1894, the number of recorded deaths once more coincides with the normal, from which it has not since greatly deviated.

2. *The seasonal prevalence of diphtheria in the years 1891-95.*—The ordinary seasonal relations of diphtheria are well known, having been worked out for London and New York by Sir A. Mitchell and Dr. Buchan in their admirable papers entitled "The Influence of Weather on Mortality from Different Diseases."[1] These authors have shown, from a consideration of the Registrar-General's weekly returns for sixteen years, that the deaths from diphtheria in London rise above the average in the beginning of September and remain above it till the beginning of March. The seasonal prevalence in New York is much the same as in London, except that the rise takes place about a month later and the range between maximum and minimum is of greater extent. They add that in New York the character of the seasonal curve remains fairly constant from year to year notwithstanding much fluctuation in the number of deaths. Looking at the London mortality curve for 1891 we see that the usual seasonal features are on the whole fairly well maintained, in spite of the somewhat exceptional mortality in the earlier part of the year. In 1892 the general rise begins, the most marked step occurring at the end of April and beginning of May, and to the high level of mortality thus abnormally reached and maintained the usual autumn exacerbation appears to be superadded. The curve for 1893 is a very fluctuating one, but in spite of the great variation of numbers from week to week and the general upward tendency of the curve the autumnal invasion is again well marked and of greater value, both absolutely and relatively, than in any previous year. In 1894, however, we find an altered state of things. With the high mortality of November, 1893, the disease seems to have in great measure spent its force; and a downward tendency begins which by the beginning of June brings the deaths to within ten of the corrected average. Here another rise seems to be starting, but it never becomes fully developed; and although September, as usual, shows a considerable increase in the number of deaths, the accustomed heavy mortality of the end of the year is altogether missing. The curve for 1895 has not as yet shown any marked elevation; a slight upward tendency, however, has been in progress since April, the further development of which it will be interesting to watch.

3. *Diphtheria and school attendance.*—In his excellent Annual Report of the Medical Officer of Health of the Administrative County of London, 1893, and more recently in his Presidential Address to the Epidemiological Society in 1894, Mr. Shirley Murphy has adduced much reason for thinking that the increased prevalence of diphtheria in this country is at least partly due to the operation of the Elementary Education Act of 1870. This conclusion, based by him mainly on the observed facts of age incidence of diphtheria, derives additional support from a consideration of the tables before us. The fall during the summer holidays in August and the rise corresponding to the reassembling of the schools in September are plainly shown by the curves of weekly deaths in every case; though, as Mr. Shirley Murphy notes, the August fall is less conspicuous in 1892 than in other years.

4. *Diphtheria and "croup."*—I now turn to the question of the relation between diphtheria and what appears in the Registrar-General's returns as "croup." Dr. Longstaff[2] cites with approval the opinion of Dr. Whitelegge "that there is no such disease as croup"; and it has long been admitted on all hands that a great deal of "croup" is actually diphtheria. In Table II. I have given the figures for "croup" corresponding to those in Table I. for diphtheria, and the same data are presented in graphic form by Wall Diagram 3.

TABLE II.—*London, 1891-95: Weekly Deaths from "Croup," with Corrected Means for Ten Years of the Corresponding Weeks.*

Weeks.	1891. Deaths.	1891. Means.	1892. Deaths.	1892. Means.	1893. Deaths.	1893. Means.	1894. Deaths.	1894. Means.	1895. Deaths.	1895. Means.
January:										
1	10	16·4	14	15·8	6	15·0	4	13·7	3	12·9
2	10	17·2	14	16·5	5	16·7	3	15·2	3	13·6
3	9	17·6	7	16·8	7	16·1	5	14·1	5	12·1
4	6	15·2	13	13·9	4	13·4	6	12·6	1	11·3
February:										
5	9	13·8	10	12·9	3	12·1	2	10·9	1	9·2
6	12	14·4	6	14·0	4	12·6	7	11·3	5	10·7
7	9	15·5	11	14·8	4	14·8	3	13·1	3	11·9
8	18	15·4	17	15·4	5	15·3	6	14·0	6	13·7
March:										
9	14	15·4	9	15·0	5	14·5	4	12·9	5	11·8
10	6	12·5	6	11·5	1	10·8	4	9·4	3	8·3
11	12	16·6	4	16·3	2	15·2	4	13·2	1	12·3
12	13	12·2	10	11·9	3	11·0	2	9·9	4	9·3
13	12	13·8	8	13·5	6	12·6	3	11·0	3	10·2
April:										
14	10	15·9	4	14·2	8	13·3	4	12·1	4	10·3
15	11	13·4	6	13·1	6	11·4	4	10·1	1	9·2
16	9	12·2	6	10·7	1	9·3	1	8·3	3	7·3
17	8	11·9	—	11·3	2	10·1	3	8·9	4	7·8
May:										
18	9	11·4	3	11·5	4	9·7	3	8·7	4	7·4
19	5	10·0	2	9·3	5	8·2	5	7·3	—	6·1
20	10	13·3	4	12·1	2	10·7	3	9·4	2	8·4
21	8	11·6	6	10·9	1	9·8	3	8·4	3	6·9
June:										
22	8	8·7	3	8·8	2	7·6	—	6·3	5	5·1
23	1	11·9	2	10·6	3	8·5	4	8·1	1	6·9
24	6	11·2	5	10·6	2	9·5	2	8·1	1	6·8
25	4	8·7	1	7·9	4	6·4	3	5·8	4	4·5
26	5	10·6	1	9·8	1	8·3	—	6·5	2	5·4
July:										
27	5	9·1	6	8·3	7	8·0	3	7·6	—	—
28	4	10·9	5	10·0	4	9·1	6	7·8	—	—
29	5	9·4	2	9·2	4	8·2	2	7·4	—	—
30	6	9·5	2	8·7	4	7·1	3	6·8	—	—
August:										
31	3	10·3	3	9·4	5	8·3	3	7·5	—	—
32	5	11·1	6	10·0	1	8·1	4	7·0	—	—
33	7	9·8	4	9·0	—	8·0	2	6·5	—	—
34	4	11·2	2	10·4	5	8·8	1	7·8	—	—
September										
35	4	9·2	2	8·8	2	6·2	4	5·4	—	—
36	3	10·4	2	9·2	2	7·7	2	6·5	—	—
37	7	11·3	2	11·0	6	9·3	1	7·7	—	—
38	4	10·7	4	9·4	4	8·9	5	7·7	—	—
39	10	12·0	5	12·1	4	10·3	3	9·3	—	—
October:										
40	6	12·3	6	11·0	2	9·5	3	8·2	—	—
41	5	15·6	3	13·7	2	12·1	3	10·0	—	—
42	12	17·7	5	16·9	6	15·5	3	14·4	—	—
43	7	14·8	6	14·0	3	12·2	1	10·7	—	—
November:										
44	9	13·3	2	12·7	11	11·6	5	11·4	—	—
45	15	13·7	5	14·0	6	13·2	2	12·0	—	—
46	7	14·7	3	13·6	9	12·0	—	11·0	—	—
47	6	15·9	3	14·1	5	12·3	5	10·7	—	—
December:										
48	5	15·0	4	14·0	3	12·7	4	10·7	—	—
49	10	16·0	4	14·8	7	12·9	3	11·8	—	—
50	6	17·3	5	16·7	6	14·9	3	12·6	—	—
51	10	15·0	11	13·9	3	13·0	3	12·0	—	—
52	5	17·2	3	16·0	10	14·6	4	13·3	—	—

The facts thus disclosed appear to me to make in favour of the view that, at least in past years, "croup" has robbed diphtheria of many deaths that were its due. While diphtheria has been rising, croup, we see, has been falling in a way more suggestive of altering diagnosis than of real diminution of disease.

5. *Effect of the antitoxin treatment.*—The last point which I shall here deal with is the diminution in mortality which has become apparent since the spring of 1894. The average weekly number of deaths from diphtheria for the whole year, which rose from 26·2 in 1891 to 36·2 in 1892, and to 62·8 in 1893, fell in 1894 to 51·4, and for the first half of the present year to 33·5. It is evident that from some quarter fatal diphtheria has received a check. This is not to be explained by any diminished occurrence of the disease, for it has remained, on the whole, as prevalent as ever. Evidence of this is furnished by Table III., with its accompanying diagram (4), which give the weekly number of admissions and cases under treatment for diphtheria in the Metropolitan Asylums and London Fever Hospitals since the beginning of 1893.

[1] Journal of the Scottish Meteorological Society, vol. iv., pp. 187-265, and vol. v., pp. 171-183.

[2] Studies in Statistics, 1891, p. 321, note.

TABLE III.—*London: Diphtheria: Cases in Hospitals and Admissions for every Week, 1893–95.*

	1893.		1894.		1895.	
	Cases.	Admissions.	Cases.	Admissions.	Cases.	Admissions.
January:						
1	255	56	289	64	499	64
2	266	35	290	62	517	74
3	271	50	310	70	514	74
4	268	55	319	69	528	72
February:						
5	274	53	320	57	519	76
6	281	57	334	80	500	49
7	290	64	350	50	498	55
8	278	56	310	64	486	54
March:						
9	267	34	303	67	463	43
10	276	64	304	69	455	55
11	277	51	307	63	456	61
12	293	55	289	56	455	64
13	283	47	307	66	435	67
April:						
14	283	58	306	68	440	71
15	280	54	315	71	435	64
16	301	73	316	60	441	73
17	302	60	316	63	432	69
May:						
18	318	71	324	76	457	79
19	332	75	323	60	464	73
20	325	61	306	63	486	87
21	327	64	324	79	492	79
June:						
22	294	49	330	56	508	88
23	306	80	337	83	529	86
24	288	71	347	84	562	107
25	291	76	349	71	593	128
26	293	53	351	78	633	115
July:						
27	304	67	351	90	—	—
28	295	46	365	66	—	—
29	278	59	402	94	—	—
30	295	69	435	102	—	—
August:						
31	281	71	470	99	—	—
32	282	68	482	88	—	—
33	272	69	458	69	—	—
34	291	78	448	71	—	—
September:						
35	291	53	450	75	—	—
36	290	54	464	103	—	—
37	282	54	486	96	—	—
38	287	79	495	101	—	—
39	296	74	496	90	—	—
October:						
40	314	79	502	98	—	—
41	310	59	521	106	—	—
42	309	54	521	96	—	—
43	308	63	523	94	—	—
November:						
44	306	69	537	99	—	—
45	291	70	548	97	—	—
46	301	75	544	83	—	—
47	311	80	526	100	—	—
December:						
48	308	56	517	78	—	—
49	318	54	514	104	—	—
50	298	51	521	101	—	—
51	298	71	510	80	—	—
52	283	43	521	75	—	—

I am aware that these figures form only a rough measurement of the prevalence of disease; for, in addition to the fact that, to quote the Registrar-General's weekly returns, "in a considerable proportion of cases the diagnosis sent on admission is found, after sojourn in the hospital, to have been erroneous," it is also true that the proportion of hospital admissions to total cases notified is a variable one, ranging, for instance, in the cases of the hospitals of the Metropolitan Asylums Board, for the four years 1890–93, from 15 per cent. in 1890 to 25 per cent. in 1892;[2] moreover, it must be remembered, as has been specially pointed out by Dr. Whitelegge, that a period of great prevalence of a disease is by no means necessarily one of great case mortality. Still, when every allowance has been made for these sources of error, it must be granted to be a striking fact that the prevalence of diphtheria from the middle of 1894 up to the present date is out of all proportion to the number of fatal cases. Now, the antitoxin treatment of diphtheria began to be employed in this country in June, 1894, and by the end of the year it was in fairly full operation. It is, I think, an inference well warranted by the facts of the case that this method of treatment was last year instrumental in preventing the usual autumnal rise in the number of fatal cases, and has helped during 1895 in keeping down the diphtheria mortality in spite of the large amount of the disease still present in the metropolis.

[2] See Annual Report of Medical Officer of Health of London, 1893: Diphtheria, Diagram XI.

FRIDAY, AUG. 2ND.

Security of Tenure of Medical Officers of Health.

On Friday the concluding meeting of this Section was held, when Dr. COLLINGRIDGE occupied the chair.

At the commencement of the proceedings Professor G. VAN OVERBEEK DE MEYER invited the members of the Section to a "Conférence Internationale concernant les Services Sanitaires des Chemins de Fer et de la Navigation," shortly to be held at Amsterdam, the matters to be discussed being the personal fitness of the officials, the organisation of the medical service, and the hygienic interests of officials and travellers.

Dr. WHITELEGGE then introduced a discussion on the Insecurity of Tenure of Extra-Metropolitan Medical Officers of Health under the Public Health Act of 1895.

Dr. CARROLL, Dr. MANLEY, Dr. GRAHAM, Dr. MARSDEN, Brigade-Surgeon-Lieutenant-Colonel PRINGLE, Dr. SLADE KING, Dr. GROVES, Dr. CAMERON, Dr. BARWISE, Dr. OGILVIE GRANT, Dr. BOND, and Dr. WILLOUGHBY took part in the discussion, which concluded with the passing of the following resolution: "That this Section desires to reiterate the opinion which has been expressed at previous meetings of the Association that the interests of the public, no less than the just demands of medical officers of health, require that the same security of tenure which is enjoyed by medical officers of health in the metropolis and Scotch counties and by Poor-law medical officers should be conceded to provincial medical officers of health, and requests the Parliamentary Bills Committee to take such steps as may seem expedient to bring this matter under the notice of the Local Government Board."

Dr. SPOTTISWOODE CAMERON read a paper on the Destruction of Town Refuse, and, some other papers being taken as read, the business of the Section concluded.

PATHOLOGY.

THURSDAY, AUG. 1ST.

Pernicious Anæmia.

Dr. HUNTER opened a discussion upon Pernicious Anæmia with a paper in which he reviewed the present knowledge of the subject. He concluded that pernicious anæmia was a special disease apart from the other forms of anæmia, because the latter (such as occur in cancer and other diseases) do not show the same pathological changes in the blood that are met with in this form; because the extreme degree of blood change is always associated with marked pathological changes in the liver, kidney, and spleen such as are not found in traumatic and other anæmias. In refuting Dr. Stockman's views, that the main difference between pernicious anæmia and other forms of anæmia lay in the presence of hæmorrhages in the former and not in the latter, he said that he had failed to produce pigment deposits in the liver by injecting large quantities of blood into the peritoneal cavity of rabbits, and further that in his experience hæmorrhages in pernicious anæmia were very rare except into the retina and meningeal membranes.

Dr. COPEMAN expressed his opinion that pathological urobilin only occurred in those cases of pernicious anæmia associated with high temperature, and he thought that there were other cases in which just as profound changes occurred in the blood without the deposition of pigment in the liver.

Dr. GIBSON and Dr. STOCKMAN joined in the discussion, and Dr. HUNTER replied.

Owing to the time of the Section having been fully occupied with these discussions, the following papers were taken as read:—

Dr. MACFADYEN on the Formation of Methyl Mercaptan in the Body and its Production by Bacteria.

Mr. P. FURNIVALL on Acromegaly.

FRIDAY, AUG. 2ND.

Lymphadenoma and its Relation to other Morbid Growths.

The discussion upon this subject was opened by Mr. W. G. SPENCER, assistant surgeon to Westminster Hospital. Lymphadenoma, he said, is a suitable term for those affections the various forms of which have one feature in common—viz., a growth of lymphadenoid tissue closely resembling in structure that of lymphatic gland. In the present state of our knowledge it is better to rest content

with some general classification such as can be inferred from clinical facts and to use as few names as possible. It appears to me that the attention of this meeting may most usefully be directed towards a consideration of the causation of lymphadenoma, and as experimental data are wanting the subject of causation must necessarily be considered chiefly from a clinical standpoint. If we do this we may take as a guide at the start the analogy of tubercle, and distinguish a local disease under the head of lymphadenoma from a general affection, lymphadenomatosis, the latter being related to the former perhaps as general tuberculosis to a local mass of tubercle. Of local lymphadenoma we may further mark out two types—one simple lymphadenoma, in which the cause is more or less continuously acting upon the lymphadenoid tissue from the surface of the mucous membrane or skin, whereas in the more malignant form there is a lack of evidence as to the external source of the irritation; but, on the other hand, an essential proclivity on the part of the cells to proliferate, the cause of which must be within the tumour itself.

Simple Lymphadenoma. — The term lymphoma, since it includes no reference to *lymphatic gland*, requires qualification when used. Simple lymphadenoma forms a strictly local overgrowth of lymphadenoid tissue kept up by some cause acting from without, the growth ceasing when the cause ceases to act.

[Mr. SPENCER here gave instances of various irritations which cause simple enlargement of lymphatic glands. He continued:]

Malignant Lymphadenoma.—(The name Lymphosarcoma tends to connect the affection with sarcomas of lymph glands which differ widely from it in character.) In malignant lymphadenoma we have a factor distinct from the local irritation to which we ascribe the simple form, for in it there is the tendency on the part of the cells to proliferate indefinitely. The connective tissue cells of the gland capsule and septa likewise take part to some extent in the growth. We fail to find, at any rate after the earliest stages, any source of irritation sufficient, acting simply from without, to keep up the continued and indefinite multiplication of the cells. The cause of this continued multiplication of cells must therefore be within the tumour. In these respects malignant lymphadenoma resembles sarcoma, but in other points they are unlike. Malignant lymphadenoma does not infiltrate neighbouring structures, exercising its influence by compression. It can be shelled out, as it separates easily from the surrounding tissues. Organs such as the spleen or kidney retain their shape even when greatly enlarged. Tubes such as the œsophagus, intestine, or bloodvessels are surrounded by the growth without the lumen being narrowed. The cell elements show a remarkably long life, and ulceration and degeneration do not occur.

[Mr. SPENCER pointed out the differences between this disease and true sarcoma, and referred to the value of arsenic in treatment. He continued:]

Lymphadenomatosis.—There is clearly some *general* affection which attacks lymphadenoid tissue wherever found. Great variations are met with in different cases, both as regards the severity of the attack, in the incidence upon the several parts, together with the variations which happen in the course of any single case. Hence a number of divisions have arisen, each named after one prominent symptom. The spleen, the lymphatic glands, the bone marrow, lymphadenoid tissue around the alimentary canal or in the subcutaneous tissue—one or more of these structures may be found involved in a general disease accompanied by anæmia, cachexia, hæmorrhages, intermittent irregular fever, and increase of white blood cells. "Lymphatic cachexia," "Anæmia splenica vel lymphatica," "Splenic, lymphatic or myelogenic leucocythæmia," "Hodgkin's disease," "Multiple lymphosarcoma,"—these and other names have been used, just as a number of names have been employed in the past for tuberculosis. But it tends to promote confusion if one of the symptoms of the general malady be thus elevated to the rank of a special disease. As illustrating this we may take the word "Leucocythæmia," or "Leukæmia."

[Mr. SPENCER here referred to the various ways in which an increase of leucocytes may be brought about, and the difficulty of defining sharply any one form of lymphadenomatosis. He continued:]

Leucocythæmia should, therefore, be looked upon as one symptom among others of a general disease. A more satisfactory plan would be an attempt to divide lymphadenomatosis according to its several modes of origin and the various ways by which the hypothetical virus may enter. In one group the cause of the disease appears to enter by the alimentary canal. Children suffer from anæmia, cachexia, hæmorrhages, irregular fevers, enlarged intestinal lymph follicles, spleen or retroperitoneal glands with or without an increase of white cells. Cases of this kind are very numerous; one of these conditions may alone be present, or in combination with others, or all may coexist. The nature of this cause and its connexion with other general conditions, such as intestinal catarrh, inherited syphilis, tuberculosis, and rickets, forms a subject of great practical importance. Again, young men and boys—e.g., army recruits or young prisoners—are subject to sudden attacks in which the mediastinal glands are affected, either those in connexion with the thymus or behind the lungs. The disease is often attributed to cold, damp, and foul air. Does the poison in such cases enter by the lungs? Some of the cases are most acute; in one reported by Guttmann a boy died four and a half days after the first sign of illness, the immediate cause of death being cerebral hæmorrhage, but there was also a general enlargement of lymphadenoid tissue. In some cases an infectious disease precedes the outbreak. Dr. Hale White allows me to mention an acute case commencing in a previously healthy young man after influenza. Some forms suggest a virulent infection, but the evidence as to a transfer of this infection is negative. The only exception which has been brought forward is a case under Obratzow, in which a clinical assistant who helped to plug the nostrils and examine the urine and fæces of an acute case was attacked in a similar manner and died a month after. Other probably mere coincidences have been reported in which an injury in the region of the spleen or to the bones preceded the illness. It is very difficult frequently to distinguish such cases from tuberculosis. Indeed, some appear to be instances of a mixed infection—e.g., caseation in some glands, with adenomatous enlargement, especially of the spleen, which is of course seldom attacked by tubercle except in children. In the absence of exact knowledge it is impossible to discuss the relation between the infection and the resistance on the part of the individual—the relation between the seed and the soil. But by the light of analogy we may be assured that individual differences in resistance may originate many varieties from one and the same kind of infection. If we arrange the facts gleaned from the bedside in some general way, according to the probable mode of entry of the poison, we shall be ready to receive the new light which will doubtless soon be thrown upon lymphadenoma by biological and chemical researches. The experimental work on this subject is as yet merely in a laboratory stage, and the results hitherto obtained, interesting and extremely suggestive as they are, indicate the need for further work and the direction such work should take. Micro-organisms have been found in the growths, leucocytosis and anæmia have been produced by the injection of substances into the blood of animals, and clinical observations on the administration of materials obtained from the thyroid, thymus, spleen, and bone-marrow are going on. Some amount of mutual contradiction and of negative results inevitably take place in the earliest stages of an experimental research, and this prevents for the present any formation of an opinion upon the matter.

Mr. J. JACKSON CLARKE opened the discussion on the paper. He thought that no distinction could be made between lympho-sarcoma, Hodgkin's disease, and lymphadenoma. His experience of the use of arsenic in this disease was that it was only of temporary benefit, and he thought that many of the cases of lymphadenoma eventually went on to typical sarcomatous infiltration. Infiltration of the skin he regarded as a help in the diagnosis, especially in the case of deeper-seated mediastinal growths. In one case of lymphadenoma which he had seen the simple enlargement became eventually tuberculous, and finally a condition of pyæmia was set up. In those cases where cocci are found they are superadded and are evidence of the pyæmic condition of the patient. In leucocythæmia he had noticed lymphomatous growths in various organs, and he hesitated to mark these off as distinct from lympho-sarcoma. He drew attention to the occurrence of lympho-sarcoma in connexion with gout and osteo-arthritis; in the latter the bone-marrow shows small nodules of lympho-sarcomatous infiltration.

Dr. R. MURRAY LESLIE was in favour of the hypothesis that lymphadenoma was organismal in nature. He thought

considerable light was thrown on the pathology of the condition by a careful study of aberrant forms and allied diseases. He described forms to show that one or more, or all, the lymphoid structures may become involved in different ways, and also that there is a close relationship existing between lymphadenoma and such diseases as leukæmia and splenic anæmia. The number of leucocytes and hæmocytes depend on the relative involvement of blood-destroying structures. Dr. Leslie was of opinion that a study of the pathology of such cases would tend greatly to clear up our knowledge of hæmatogenesis and hæmatolysis. He brought forward the following points in favour of the hypothesis of organismal origin: (1) certain cases seem to owe their origin to exposure to foul air; (2) micrococci and other organisms have been found in the affected structures; (3) the close analogy which exists between this and tuberculosis and other organismal diseases; (4) affection of the cervical glands would point to infection by the mouth, of the mediastinal glands by the lungs, and of the mesenteric glands and Peyer's patches by the alimentary canal; (5) pyrexia and night sweats are present, as in other organismal diseases; and (6) the beneficial effects of arsenic are probably to be attributed to its germicidal action and are comparable with the action of mercury in syphilis. For these and other reasons he would class lymphadenoma in the great group of granulomata, of which syphilis, tubercle, and leprosy are examples.

Dr. G. N. PITT, in a paper, noticed the affection of bronchial glands following on chronic bronchial irritation. He distinguished true lymphadenoma as consisting of an adenoid overgrowth limited to adenoid tissue, which never fungates or infiltrates, and which destroys only by pressure on vital structures. He had seen tubercle and lymphadenoma associated together in the post-mortem room, and he thought that in the future the distinction between new growths and infectious granulomata might turn out to be less than at present supposed. He observed that where there is leucocytosis the spleen is more frequently enlarged than in those cases in which this condition is absent, though, on the other hand, a temporary and variable leucocytosis might occur apart from splenic enlargement. He related a case diagnosed by microscopic examination as spindle-celled sarcoma which had cleared up under arsenic, and he was not therefore in agreement with Mr. Spencer, who concluded that if improvement took place under the use of this drug the disease must be lymphadenoma.

Dr. H. SNOW strongly insisted on the importance of differentiating cancer of the lymphoid tissues from true lymphadenoma or Hodgkin's disease. He recognised three main forms of lymph-gland enlargement, differing from one another widely in microscopic appearance and also clinically. 1. Simple lymphoma. 2. Hodgkin's disease, an obscure general enlargement of glands throughout the body, pyrexial in character, and associated often with pregnancy or exposure to cold or wet, microscopically showing a cirrhosis of the gland, the cell elements being eventually crushed out by redundant fibrous tissue. 3. Lympho-sarcoma or lympho-carcinoma, a true cancer, always primarily local, following injury generally and showing all the features of cancer elsewhere—e.g., progressive cell proliferation, erosion of all adjacent tissues, and progressive tendency to death. He alluded to the marrow as an important adenoid tissue, and thought that implication of this might explain multiple hæmorrhages.

Dr. CLAUDE WILSON made some remarks bearing on the tendency exhibited by speakers to group together, rather than to differentiate, the different diseases under consideration. He mentioned a family in which the grandmother, her two children and two grandchildren all suffered from splenic anæmia, but in which there was no leucocytosis.

Mr. SHATTOCK distinguished between lymphatic growths and tuberculous growths; in the former the tissue was a true lymphatic tissue, whereas in the latter the granuloma consisted of granulatory tissue. He said that it was true that in lymphadenoma the new growth was normal in structure, but he maintained that that also was the case in carcinoma, in so far as it was a reproduction of normal structure, and yet it was malignant.

Dr. WILKS referred to the teaching on the subject in days gone by and asked whether in lymphadenoma the process is not infective in its later stages.

Mr. SPENCER, in reply, said he would like to keep the term lymphoma for affections of the lymphatics and lymphadenoma for those of the glands. He thought that the intervention of a micro-organism was not absolutely necessary for the production of a new growth. Leucocythæmia he regarded as a symptom rather than a disease, and he advised caution in concluding the presence of lymphadenoid growths in the liver and kidneys from the naked-eye changes, as old hæmorrhages bear a close resemblance to them. He argued that the readiness with which lymphadenomatous growths shell out was a means of differentiating them from lympho-sarcoma.

Dr. AULD then read his paper on Hæmatogenous Jaundice, which had been postponed from the previous day, and Dr. HUNTER contributed a few remarks thereon.

Professor BABES (Bucharest) read a paper in French on the Morphology of Pathogenic Bacteria.

Dr. HEWLETT gave a demonstration of the Diazo Reaction in the Urine of Typhoid Fever. The point which he brought forward was that morphine gave the same reaction with Ehrlich's test, even in such dilute solutions as 1 in 5000. He laid stress on the colouring of the froth in the test tube in typhoid fever and with the morphine, which could not be obtained in the urine of patients suffering from tuberculosis and other febrile diseases, though the dark colour in the fluid was obtained with the test. He had tried to obtain a reaction with various other substances besides morphine, amongst which was a fine culture of the bacillus typhosus, but he had not succeeded. In cases of typhoid fever he thought the reaction could be obtained as early as the sixth day, but he did not regard it as an absolutely infallible test. He thought that its absence in a febrile disease (proving the absence of typhoid fever) was of more clinical value than its presence.

Dr. ST. CLAIR THOMSON, in conjunction with Dr. HEWLETT, read a paper on the Fate of Micro-organisms in Inspired Air. From the results of their experiments they were of opinion that in quiet respiration micro-organisms were for the most part arrested by the vibrissæ at the entrance to the nasal passages, and that the mucous membrane of the nose was aseptic.

Dr. SURVEYOR described an experiment which he had made to show that the intestinal gases were void of micro-organisms.

Dr. HEWLETT replied.

The following communications were also made to the Section:—

On Psorospermiasis, by Dr. I. O. W. BARRET and Dr. N. F. SURVEYOR.

The Growth of the Cholera Vibrio in Sunlight, by Dr. F. F. WESTBROOK.

Dr. F. R. WALTERS then read the history and symptoms of a case of Pulmonary Hypertrophic Osteoarthropathy. The patient was shown to the members. Dr. Walters expressed his opinion that the disease was different from acromegaly, and that it was probably due to action on the tissues of the toxines produced by micro-organisms.

On the motion of Dr. F. R. Walters a vote of thanks to Dr. Wilks for presiding was carried by acclamation, and this terminated the proceedings of the Section.

OTOLOGY.

WEDNESDAY, JULY 31ST.

Objective Tinnitus.

Sir WILLIAM DALBY, after his preliminary address, which was published in THE LANCET of Aug. 3rd, showed a case of Objective Tinnitus in a young woman. The noise had existed eighteen months and it did not alter with position. The sound was distinctly audible on approaching the ear to that of the patient, and was of a creaking character synchronous with the pulse. No satisfactory explanation of its occurrence was elicited in the course of the discussion.

Nerve Deafness.

A discussion on the various forms of Nerve Deafness was opened by Dr. DUNDAS GRANT. These might be classified as follows:—I. Diseases of the labyrinth—(1) the labyrinth alone, due to (*a*) circulatory disturbances; (*b*) infectious diseases, syphilis, mumps, &c.; (*c*) rheumatism; (*d*) traumatism; (*e*) professional—i.e., the action of sound; (*f*) toxic labyrinthine disease; (*g*) senile changes; (*h*) new growths; (2) labyrinthine disease secondary to middle-ear inflammations—(*a*) chronic catarrhal, including typical Ménière's disease; (*b*) suppurative; (*c*) middle-ear inflammation following general infectious diseases—i.e., diphtheria, scarlet fever, &c. II. Diseases of the auditory nerve and

cerebral auditory centres—(1) neuro-labyrinthitis following supurative meningitis and cerebro-spinal meningitis; (2) cerebral syphilis; (3) intracranial and auditory nerve neoplasms; (4) lesions of the cerebral auditory centres; (5) tabes; (6) hysteria; (7) reflexes; (8) diplacusis; (9) colour-hearing. As regards treatment in the first, or labyrinthine, division, depletion was first to be thought of in circulatory disturbances with a full habit; puncturing of the inferior turbinal was a good mode of procuring the desired effect. Syphilitic cases derived benefit from profuse sweating as obtained by a Turkish bath. This accounted no doubt for the benefit sometimes obtained from pilocarpine injections, which, to be successful, must be employed before the effusion, either mucous, serous, or purulent, has become organised, and should therefore always be tried in the first instance. The remedy was not unattended with risk. It was indicated in symptoms of labyrinthine effusions and hæmorrhage, contraindicated in anæmia. There was a good probability of recovery in syphilitic cases if used at once; it should be laid aside if no effect was observable in a fortnight. All cures reported have occurred in the early stages. The deafness of hereditary syphilis was always rebellious. Hill, McBride, Gradenigo, and others have reported cures, but Dr. Grant had not met with an instance. Pilocarpine should be tried in labyrinthitis following mumps and also in leukæmia and infectious diseases. A case of almost complete recovery in labyrinthitis of scarlet fever was reported in vol. iv. of the *Archives of Otology*. The remedy should be avoided and substituted by galvanism in professional deafness. In labyrinthine disturbance and its sudden loud noises, Delstanche's rarefacteur had been known to produce immediate improvement, by restoring to a normal condition the undrawn tympanic structures and stapes. Pilocarpine is also contra-indicated in toxic deafness, new growths, and inflammation of the auditory nerve due to meningitis. Counter-irritants were indicated in the latter instance, with rest, particularly in leukæmia. To obtain fnnctional rest from noise, the ears should be stopped with cotton wool and the head wrapped up. Cerumen is partially protective in such cases, and it became a question as to the advisability of removing cerumen in the case of boiler-makers and others subjected to loud noises. Sedatives were indicated in mental disturbance, and bromides might be used freely unless the anæmic element was present. The galvanic current was also serviceable in tinnitus. The positive pole should be applied to the back of the neck and the negative to the tragus or mastoid. Four to eight milliampères were to be employed, especially in complicated labyrinthitis following exposure to noise, but the remedy must be employed with discretion. Strychnine was useful, especially in women who were overworked and underfed. Quinine was serviceable in counteracting giddiness and vertigo rather than deafness. Depressants such as colchicum should be given in gouty subjects. The case was mentioned of a lady who suffered from disharmonic diplacusis. She had diplacusis for high-pitched tones. Her Galton was +·7 on the left side, 2·6 on the right. Under colchicum and the iodide her hearing distance improved, and the diplacusis vanished. Hypnotic suggestion was a remedy of some promise in hysteria. The hysterical deafness was a condition of auto-hypnotism. A related form was common in young girls with amenorrhœa. Dr. Grant, after mentioning the acoustic exercises of Urbantschitsch, and the value as a last resource of lip-reading for deafness, concluded by insisting upon (1) the necessity for a careful diagnosis in nerve deafness; (2) upon the importance of pilocarpine as a remedy in selected cases; (3) recognition of the many-sided character of nerve deafness; (4) recognition of changes in the labyrinth due to senility; (5) recognition of the frequency of chronic aural catarrh as a cause of Ménière's disease; (6) the influence of exposure to noise, and the importance of protection from them.

Dr. MACNAUGHTON JONES enlarged upon the difficulty of isolation of diseases of the auditory nerve, and alluded to fifty cases of absolute deafness which he had published. He considered treatment extremely unsatisfactory, but thought some good was obtained by treatment of so much of the deafness as might be attributable to disease of the middle ear. He thought prophylaxis of great importance, and advised careful watching of children with adenoids. He always insisted that children of deaf parents incurred great risk by residing in malarial districts and further remonstrated against operations upon the nose being suggested for the relief of established and incurable deafness.

In the discussion which followed, Dr. BARR sympathised with Dr. Macnaughton Jones in his remarks on implication of the middle ear, the condition of which should be carefully investigated. With reference to the pilocarpine treatment, he had been disappointed with the results. He now thought that when a cure resulted it was due to a mental effect. The patient made an earnest effort to hear better, but when carefully tested the patient's statements were not borne out. A woman who had sclerosis of the middle ear, with a bad prognosis, underwent the treatment for several weeks in the hands of another practitioner, and at the end expressed herself much better, but he did not discover the slightest improvement, in fact her H.D. for the watch was rather worse. He had used pilocarpine in cases of recent effusion into the labyrinthine spaces when vertigo, tinnitus, &c., were present, but without any benefit.

Dr. LAW raised a question as to the benefit obtainable for deaf patients suffering from secondary, tertiary, or inherited syphilis by the use of mercury or iodide of potassium. Two cases had been under his care lately. In the first, the symptoms of secondary syphilis were present, including roseola rash, iritis, and mucous patches in the throat. Mercury was used in the form of inunction, with rest in bed. All the symptoms excepting the deafness disappeared. After this from twenty-five to thirty injections of pilocarpine were administered without benefit. Subsequently paraplegia developed, the iodide of potassium was administered again, the paralysis disappeared, but the deafness remained as before. A similar case in the secondary stage was treated with a similar result. He had not met with any better success in treating syphilitic deafness in the tertiary stage or in the hereditary form.

Dr. WOODS (Dublin) had had a similar experience.

Dr. MILLIGAN (Manchester) recommended the treatment of the middle-ear in cases of nerve deafness following middle-ear disease. Some cases of nerve deafness were influenced by mental treatment, there were in some cases tinnitus and a temporary absence of bone conduction, requiring change of air, rest, and tonics. He had been most disappointed in the results obtained from pilocarpine in both syphilitic and non-syphilitic cases. He had not found benefit in recent effusions into the labyrinth either. He instanced this fact by a case of a gentleman who was a free liver and a great smoker and who awoke one morning quite deaf. There were all the symptoms of effusion into the internal ear. Pilocarpine injections were given for six weeks without any benefit. He thought that in secondary changes of the auditory nerve, the patient was much better left alone.

Mr. E. H. BENNETT (Leicester) reported three cases of slight improvement. He had lately treated a child which had been for some time under care for keratitis, then deafness came on. He tried pilocarpine and also employed Politzerisation. In a fortnight a slight improvement was noticeable, and then after twenty injections altogether, the parents reported that the child heard as well as ever, but, of course, he was not in a position to state that the result was altogether attributable to the pilocarpine treatment.

Dr. WARDEN (Birmingham) began the treatment of syphilitic cases with the perchloride of mercury, followed by tonics, such as strychnine and hydrobromic acid, and quinine, followed by galvanism. Pilocarpine had made no definite impression on his cases. He agreed with Dr. Macnaughton Jones that large doses of quinine had caused persistent deafness.

Mr. G. P. FIELD repeated his experiences. He thought the treatment of nerve deafness was not satisfactory, but he was satisfied with the good results that might be obtained from pilocarpine if the cases were correctly chosen. He had had a good many successful cases.

The PRESIDENT regretted that Mr. Field could not give scientific details of his successful cases, and summed up the views that had been expressed by the previous speakers. He said with reference to quinine that the results of administering it were very different in deaf patients from that in those who were well. Healthy people regained their hearing after taking the drug, but deaf people recovered with an increased amount of deafness. Knapp had stated that quinine had been pushed till people were absolutely blind, but they recovered their sight when the drug was stopped. With regard to syphilis, the rule was that in the early stages the nervous loss of the hearing is recovered during the ordinary treatment—i.e., administration of iodide &c.—hence it became a question whether we should pursue

any treatment directed to the hearing apparatus unless the middle ear is involved.

Dr. DUNDAS GRANT, in replying, remarked that middle ear complications were not sufficiently treated when occurring with nerve deafness and syphilitic labyrinthitis; sometimes these complications formed an essential part of the case. He thought that the cases of secondary syphilitic deafness that had been brought forward were so bad that a good result from treatment could hardly be expected. Galvanism was most applicable to the class of cases he had termed professional, and to functional cases, as hysteria. With reference to etiology, there was often a multiplicity of causes in operation, as instanced by the case of a gentleman who lost the hearing of one ear and one testicle by metastasis from mumps. He had taken large doses of quinine; last of all he had had syphilis. Galton's whistle was very useful in the diagnosis of nerve deafness. The lowest turn of the cochlea was for the detection of very high tones, and in nerve deafness this function was lost. The capacity for hearing the tones of the middle range was wanting in disease of the intra-cranial part of the auditory nerve. It was difficult to know what attitude to take with reference to the cases of published cures.

Dr. MACNAUGHTON JONES replied by referring first to the pilocarpine treatment, and reviewed the whole history of its introduction. He thought it should be limited to such cases as apoplectiform vertigo, recent syphilis, leukæmia, high tension in the endolymph and perilymph and the like. In old-standing cases of syphilis there was no prospect of any benefit from any measures employed, but in the first stage a combination of iodide of potassium and the ordinary specific remedies with pilocarpine injections constituted a valuable form of treatment. If galvanism was of any use, it was more in the diagnosis than treatment of nerve deafness.

Tuberculous Disease of the Middle Ear and its Adnexa.

Dr. W. MILLIGAN read a paper upon this subject. He remarked that tubercle more often attacked the middle ear than some writers had believed. Painless perforation of the membrane, especially when complicated with facial paralysis, was usually an indication of tuberculous mischief. He had operated upon ten cases of mastoid suppuration in children, and had inoculated guinea-pigs with scrapings from the diseased bone. In eight out of the ten cases tuberculous infection followed, and upon dissection the abdominal and pelvic glands were found to show distinct evidence of tuberculous infiltration. The dissected guinea-pigs were exhibited before the section with drawings, microscopic sections, &c.

The PRESIDENT thanked Dr. Milligan for his original paper, which was deserving of the highest praise. He referred to the painless inflammations that were met with in the tympanum of phthisical and diabetic patients. As regards mastoid operations in children, these often required to be repeated, owing no doubt to the presence of tuberculous foci in the cells, and he related cases illustrating this fact from his own practice.

The Treatment of Intractable Suppurations of the Middle Ear by Operation through the Mastoid.

Dr. BARR gave an account of eight cases of suppurative disease of the middle ear occurring between the age of sixteen and thirty-two years. Four had been operated upon by himself and four by Macewen. In all the cases the purulent mischief had been of long duration—namely, from fourteen to twenty-six years. Careful treatment had been carried out in each case, and the attic, which was involved in the suppurative process in all of them, had been thoroughly syringed out, but no effect had been obtained. The instrument employed was the globular dental burr followed by the gouge, supplied to him by Macewen; the clean surface left by the burr was of great advantage in estimating the depth and direction of the opening. The burr must be hard and sharp, and should be removed every few seconds for cleaning. The burrs of British make were useless. The time from the operation to the total cessation of discharge was from two to eighteen months.

Attic Disease treated by modified Stacke's Operation.

Dr. BRONNER read notes on five cases of attic disease treated by modified Stacke's operation. All previous treatment had failed. The attic alone was opened up. He did not act through the whole meatus, but made his incision in such a direction that allowed of his pulling the ear forwards and downwards. He prolonged his incison forwards. He did not like burrs, but from what the last speaker had said he had no doubt the fault had lain with the burr.

Dr. LAW in the discussion inquired as to Dr. Bronner's results with reference to the hearing power after operations upon the attic.

Dr. MILLIGAN raised the question as to the advisability of retaining a permanent mastoid fistula. He thought it was better to leave a mastoid fistula, and to ascertain this point he had treated one-half of a series one way and another half the other. Another point was the origin of the disease of the attic; he thought it was probably a suppurative condition arising in the antrum, the pus eventually pointing through Schrapnell's membrane. If this were the case we should expose the antrum and remove the disease. The intratympanic syringe was very useful in attic disease, and this, with excision of the ossicles, was often enough to effect a cure. He asked the authors of the preceding papers how long they generally had to continue the subsequent treatment. He rarely got his wounds dry after mastoid operations under a year.

Dr. WOODS asked if previously to the operations boric acid in spirit had had a fair trial.

Dr. URBAN PRITCHARD spoke with reference to instruments. He had always found a great advantage in using the sharp spoon in preference to the burr. In cases where the bone was sclerosed throughout he has had to chisel before reaching the disease. In these it would take much less time to use the burr. He preferred the burr made by Hallam. The malleus should be removed as a preliminary so as to be able to obtain a free drainage through the ear, and in that way to avoid performing Stacke's operation or having recourse to the removal of more bone. He recalled one case under his care at King's College Hospital, in which there was no rise of temperature, and he hesitated to operate, but there was a dirty discharge, and this was a symptom he disliked very much in a man of middle age. He operated, and found a quantity of diseased bone in the mastoid. The wound healed in six weeks.

Dr. BARR, in his reply, stated that the best burrs were to be had from White of Philadelphia; English burrs rode over hard bone, and did not cut out the eburnated bone. As to the class of case operated upon, they were limited carefully to old suppurations that had gone on for years, in which all other methods (including extraction of the malleus in three of them) had failed, and that in the hands of specialists. In regard to the subsequent treatment, three had practically ceased discharging in three months and the dry treatment adopted. Other cases healed much more slowly. Syringing had been diligently practised backwards and forwards, but the treatment went on for eighteen months, during which he had rung the changes on the dry and wet methods. He soon hoped to get quicker results. The operation was still in its infancy, but he hoped it would soon be possible to cure every form of middle-ear mischief.

Dr. BRONNER stated, in reply, that there was in his cases an improvement rather than the reverse in the hearing power.

Dr. LAW showed a series of forty anatomical specimens sent from Professor Politzer.

THURSDAY, AUG. 1ST.

Discussion on Cerebral Complications in Relation to Middle-ear Disease.

Dr. MACEWEN, in opening the discussion, touched upon three points only, and wished the remainder of his paper to be taken as read. The first point was intracranial abscess, the second tubercle of the middle ear, and the third bacteria and prophylaxis: 1. Regarding the localisation of abscess, it was a fallacy to suppose that bone-conduction was present in cerebral abscess and absent in cerebellar disease. It was also a mistake to assume that bacteria reached the brain through the middle ear. Cerebellar abscess arose from disease of the sigmoid sinus, not from that of the internal ear. If the seventh and eighth nerves were intact and the aural mechanism in good order, the auditory nerve would transmit vibrations in spite of the abscess. A case of fatal leptomeningitis with post-mortem report was cited in support of these statements. 2. Tubercle of the middle ear had not received the attention it deserved. It spread slowly and with little pain or no discharge, and sometimes reached an advanced stage without perforation. Tuberculous products formed excellent culture media for pyogenic bacteria; the latter easily found their way into the softened bones. Tubercle bacilli also invaded the blood-stream by finding their way into the sigmoid sinus. In all such cases the mastoid must be freely opened and

the tuberculous disease eradicated. The middle ear also formed an excellent incubator; the organisms were afforded all they required in the way of thermic conditions; also food and darkness, and injections practically did them more good than harm. 3. With reference to prophylaxis, Dr. Macewen uttered a caution against conveying disease from ear to ear by means of instruments not properly disinfected. The aurist must be prepared to do more than treat the disorders of hearing; he must be a bacteriologist as well, and his operations are all of them of the nature of bacteriological experiments. In conclusion: (1) the spreading of infection from the middle ear was preventable; (2) when infection was once established we must ensure its eradication.

Dr. LUC (Paris) described a case that had occurred in his practice which was of an insidious character. The patient complained of pain in the occipital region; there had been protracted suppuration from the middle ear and the latter was washed out with a Hartmann's cannula, masses of cholesteatomatous material being removed. After this, Zaufal's operation was performed on the mastoid, the bone being found much diseased; the patient subsequently died, and at the post mortem an abscess was found in the cerebellum.

Mr. MARMADUKE SHEILD regretted that Dr. Macewen had confined his remarks to tuberculous disease. He did not think tubercle of the middle ear was so common as was generally supposed. Naked-eye appearances were fallacious, and the only certain test was inoculation and bacteriological examination. With reference to the disinfection of instruments, he thought much depended upon whether the surgeon made a scratch on the granulation surfaces, for the latter are protective against organisms—i.e., they hinder access to the meninges. He insisted on the importance of removing the infectious foci from the bone when operating, as the least trace left behind acted as a fresh focus for disease. When the latter spread to the base of the petrous bone it was difficult to reach it. He preferred to use a mallet and gouge, and inquired whether Dr. Macewen found it possible to remove all the carious foci by his methods. Regarding the surgical treatment of suppurative meningitis in which a general purulent meningitis extended over the base of the brain, he had not so far succeeded in treating these cases, and he inquired how Dr. Macewen dealt with them.

Dr. MILLIGAN remarked upon a fatal case of cerebellar abscess, in which bone-conduction was good. With reference to tubercle there was no very obvious clinical symptom, but often absence of high temperature, pain, and discharge. The disease was not a simple inflammatory one, therefore it was of greater importance to diagnose it. Inoculation experiments afforded the only means. It was extremely difficult to find tubercle bacilli in the discharge. He narrated the case of a small child in whom he had removed all visible disease, and death ensued from tuberculous meningitis. He could not say that the latter was directly traceable to the middle ear. In a second case death followed from diarrhœa; it was very difficult to remove every trace of disease.

Dr. MCBRIDE referred to the tendency to recurrence of the disease after an apparent cure had been effected. He did not think we were justified in promising a certain cure to the patient by operation. As to the suggestion he had thrown out in a former paper upon the question of diagnosis of cerebellar abscess by means of the tuning-fork, he regretted that what was originally a mere suggestion had since been quoted as a fact.

Mr. BALLANCE said not only did we get cranial complications in tuberculosis of the middle ear, but also serious lesions in other parts. Children suffering from hip and spinal disease often had a history of discharge from the ear, hence the importance of thorough treatment of the ear mischief. Last year he admitted two children to hospital with a discharge from the ear containing tubercle bacilli. There was a good deal of febrile disturbance, but no external sign of mastoid disease. There was at first some relief from the fever after the operation, then the temperature rose again. Eventually both these children died. In the lungs there was abundant post-mortem evidence of tuberculous disease. From these cases he inferred either that the operation was not performed soon enough, or else that the fact remains that we cannot hope for the same success in treating these cases as we meet in other diseases. Referring to what Dr. McBride had stated concerning the tuning-fork test, he had never himself regarded the test as diagnostic, but he should think there was some additional argument towards a diagnosis if no bone conduction was present on one side. Recent researches upon the effects of removing one half of the cerebellum had taught us what signs to look for. All the symptoms were present in the last case in which he operated, including headache, vertigo, vomiting, optic neuritis, nystagmus, deviation of the eye to the opposite side, and paresis of the same side, exaggerated knee jerk and all pathognomonic symptoms. He inquired what Dr. Macewen had to say upon operating on the cavernous sinus. A distinguished Parisian surgeon gave it as his opinion that we could not operate. He thought, however, we ought to be able to operate with some success. He would open the skull and dura mater on the affected side, lift up the temporo-sphenoidal lobe, divide the tentorium, and then make an incision down to the cavernous sinus, and insert a drainage-tube. Referring to the class of case mentioned by Dr. Luc, he recalled that of a child on whom he operated for cholesteatoma which had formed a huge cavity. The child did well for ten days and then died. The pillow was soaked with blood, and death ensued from erosion into the lateral sinus. He (Mr. Ballance) inquired where Dr. Macewen obtained the burrs he employed; he inferred that they were reserved for cases of sclerosed bone. He himself used a broad gouge with a cutting edge at right angles to the handle, three-eighths of an inch broad for the first part of the operation. He thought there was a difficulty in obtaining a permanent cure in Stacke's operation. He did not think Schwarze's was suited for chronic cases. We ought in operating to throw all the cavities into one, so as to have only one to dress. When discharge continued it was because the drainage through the mastoid had not been allowed to continue long enough. A residual abscess remained behind, and more bone must be removed.

Dr. BARR alluded to the danger of removing granulation tissue or polypi from the middle ear without careful antiseptic precautions. He now always subjected the ear to careful antiseptic cleansing for a week or two before removing the granulations, though he knew it was not possible to obtain absolute asepsis. With regard to the tuning-fork he always found that bone-conduction was intensified in the presence of purulent mischief.

Dr. URBAN PRITCHARD recommended avoidance of any treatment of the ear which was not antiseptic, such as syringing with plain water. His plan in a case of small granulations in the middle ear was to syringe with a 1 in 40 solution of carbolic acid several times. Probes were dipped in 10 per cent. carbolic acid in spirit. After scraping out the diseased tissue he dressed the part like a wound with bicyanide gauze. On removing the latter he did not syringe, but applied fresh gauze, and on the fourth day he found that small perforations had healed up, the surface being healthy, without a spot of discharge, and there was no trace of infection backwards. He addressed a word of warning to the surgeon: the latter is very apt to try to localise a cranial abscess and operate over that spot, and perhaps successfully, but sometimes he forgets that the mastoid has been the seat of the disease, and he fails to open the antrum and clear out that cavity as well. If we are unable to localise an abscess at first, we should clear out the middle ear by opening the mastoids and antrum, clearing them out, and going backwards to the cranial cavity, taking the lateral sinus as a guide, operating upwards for the cerebrum and below for the cerebellum, and entering the probe carefully in these parts to detect any abscess that may be present.

The PRESIDENT alluded to a paper he had read before the Clinical Society some time ago in which he divided the cases of ear disease that terminate fatally into two classes, which still remained in force. He narrated a case in which he had removed nearly the whole of the temporal bone in a child two years old for disease. He discussed the indications for employing the defensive operations, which were briefly: (1) continuous head pains and giddiness, also for the cure of a hyper- or exostosis; (2) when there was inflammation in the ear with discharge and profuse suppuration, continuing from eight to fourteen days, the patient dying from septicæmia or meningitis, and the discharge being so profuse as to absolutely pour out. In such cases the drainage between the middle ear and the mastoid should be made complete; (3) the presence of epileptic seizures. All such cases should be operated upon.

Dr. ROBERTSON touched upon the after-treatment of mastoid antrum operations. He considered the most effective remedy was the prolonged drainage of the antrum, and he employed a lead stilette for the purpose. Complete cessation of the discharge followed. He deprecated too extensive use of the syringe.

Dr. DUNDAS GRANT had tried the dental burr but gave it

up again for the small gouge, owing, he thought, to the inferior quality of the steel. He mentioned a case in his own practice which was similar to that described by Dr. Luc. He extolled the local employment of alcohol in suppurative disease of the ear, it being most potent against sepsis and moisture.

Dr. WOODS showed the brain of a case under his care in which "the operation was perfectly successful but the patient died." The patient had cerebellar abscess, and sank after the operation from no apparent cause. He also described a second case (of leptomeningitis) terminating fatally.

Dr. BARR demonstrated a specimen illustrating the effect of the burr upon a sclerosed mastoid.

Dr. MACEWEN, in reply, stated that he hoped those present had not what he called a statistical conscience, those surgeons who had a statistical conscience were apt to let people die for fear of spoiling their statistics. Sometimes the most hopeless cases got well, in one instance that occurred in his practice recently he thought the patient was dead, he was so absolutely moribund. It was a case of cranial abscess, but the operation was successful, and the patient was now alive and well. He then discussed the diagnosis of cerebellar abscess, and explained why no reliance could be placed upon any one set of symptoms, there was considerable variation in the effect of pressure on the medulla by the abscess, dependent on the fact of its being exerted on both sides or on one only. He agreed with Dr. Milligan's method of experimental inoculation; there was always a probability of tuberculous disease being present in suppurating bone. It was the duty of the aurist to prevent pyogenic infection. Could one prevent general tuberculous infection? This was possible if the disease was limited to the mastoid, and all foci here must be removed. When the disease had spread to the petrous bone it was difficult to eradicate it, but the diseased cavities must be opened up and the walls papered with healthy skin to allow free exit for the discharge. He preferred using burrs to chisel and mallet on account of the impact of the latter, which was thus avoided. He held the handle of the burr like a pen and drilled away the offending parts with the greatest ease; the sinus was easily seen through a thin film of bone and avoided. English burrs were of no use, and he employed those of the American Dental Company.

FRIDAY, AUG. 2ND.

A New Form of Rotatory Vertigo.

Professor GUYE described a case of Ménière's disease in which the rotatory sensations of the patient were of a character hitherto undescribed. He had seen similar cases. The patient was a man aged forty-seven who had had influenza four years ago, but had since been in good health. For two months he had tinnitus in his left ear, and then suddenly (last year) an attack of vertigo. He fell down and vomited. These seizures had recurred at intervals and had not yet disappeared. As regards hearing, he heard the ticking of a watch two inches from the right ear and not at all with the left. His was a typical case of Ménière's disease, and he had shown symptoms of labyrinthine disease. As regards the vertigo, he first saw objects turning round before him in the direction of the hands of a clock, then everything seemed to be turning to the right, and vomiting ensued with giddiness, which obliged him to lie down. Professor Guye then pointed out the distinction between this kind of vertigo and the better known form in which the rotatory sensations are in the vertical axis towards the side of the affected ear. When these sensations are slight there is a tendency on the part of the patient to turn involuntarily in the same direction as the sensation. When the rotatory sensation is strong and sudden it produces a reflex unconscious movement in the opposite direction. These rotatory sensations round a vertical axis might possibly be accounted for by supposing the existence of some irritation of the ampullæ of the horizontal semicircular canals. Other forms of rotation were described. Professor Guye sought to explain these phenomena by reference to the anatomical position of the superior and posterior canals. A slight rotatory sensation in the superior canal would give rise to a feeling of falling forwards or backwards, but around an axis which, instead of being transverse, is inclined to the right or left, according to the side affected. An affection of the posterior canal would give rise to a sensation of objects rotating in front of the patient like the hands of a clock the disc of which is not in front but to the right or left of the patient. More accurate observation on the part of aural surgeons and comparison of clinical with post-mortem observations were required.

Objective Tinnitus.

Mr. CRESSWELL BABER showed a patient, a young woman suffering from Objective Tinnitus, but differing in many respects from Sir William Dalby's case. The sound heard was a soft blowing souffle, very distinctly audible by means of an auscultation tube. It was synchronous with the pulse.

Turbinotomy.

Mr. T. CARMALT JONES read a paper on Turbinotomy in cases of Deafness and Tinnitus Aurium. Removal of hypertrophied inferior turbinals and moriform growths should be practised in cases of deafness and tinnitus where the auditory nerve was in a healthy condition. The naso-pharynx was the cause of much secondary ear trouble. He had operated in upwards of 500 cases. The pain after the operation varied, as did the amount of bleeding. The best anæsthetic was nitrous oxide gas or the A.C.E. mixture, the latter being preferable for children. Notes were read of twelve cases of deafness or tinnitus in which turbinotomy had been performed. Eleven of these were cases of deafness and tinnitus combined. Relief to both conditions was afforded in eight cases; slight relief to deafness only in one. In two there was no relief at all.

A discussion followed in which Mr. BABER, Dr. BRONNER, Dr. MACNAUGHTON JONES, Dr. PRITCHARD, and others took part.

Treatment of Nerve Deafness.

Dr. MACNAUGHTON JONES read a paper on: 1. Some Otological Considerations of the Treatment of Nerve Deafness, based upon a case of Ménière's disease. There had been absolute deafness in one ear for many years. The sound ear was subsequently attacked suddenly. Guy's symptom of reeling towards the affected side was present. Careful study of the cause of aural vertigo was important as possibly leading to a diagnosis. The middle-ear element and all other sources of vertigo being carefully excluded, we were in a position to decide upon the apoplectiform character of the case, and might be able to detect unsuspected disease in other organs than the ear. 2. An extreme case of Hyperæsthesia Acoustica. The patient, a woman aged fifty-five, said her hearing was dreadfully acute. She responded perfectly to the usual hearing tests. Music made her giddy; even a clock in the room was unbearable. Some noises sent a sort of shock up her spine. All this came on after a carriage accident and blow on the head. There was now a great improvement, but not a complete relief, after seven years. He thought that in some cases of hypersensitiveness to sound traceable to middle-ear disorders &c. there was an analogy to intolerance of light as occurring in certain retinal lesions, but he did not think there was any ocular condition analogous to such a typical case of acoustic hyperæsthesia as the above.

Mr. LAKE read a paper, illustrated by specimens, to show that the membrana tympani was in direct continuation with the periosteum of the Eustachian tube and external meatus.

Dr. PEGLER showed under the microscope Sections of Turbinate Hypertrophies. Many showed practically no departure from the normal. His main point was that he had not discovered any true hypertrophy of the visceral muscle fibre in the walls of the vascular sinuses. The second set illustrated the structure of so-called moriform hypertrophies, taken from both middle and inferior turbinates and from the wall of the septum, &c. The complete distinction between these growths and true papillomata, with which they were still confounded, was insisted on. He contended that the papilliform hypertrophies were essentially vascular outgrowths which had gradually become the subject of œdematous infiltration. The muscular walls of the sinuses were invaded by the process, so that they became attenuated, and dilatation followed. As to whether true mucoid degeneration was present or not he was extremely doubtful. Most of the septal growths he had examined were of this character, but true papillomata did occur here as well as on the floor of the meatus.

Mr. CRESSWELL BABER exhibited a set of Dummies designed to educate the fingers of students in the Exploration of the Naso-pharynx.

Dr. WARD COUSINS drew attention to a further improvement in the Artificial Drumhead introduced by himself some time ago. The demonstration gave rise to a good deal of discussion, in which the PRESIDENT, Dr. PRITCHARD, Professor GUYE, Dr. LAW, and others took part.

Dr. LAW showed a series of Anatomical Preparations kindly lent for exhibition in the Otological Section by Professor POLITZER.

The work of the Section concluded with a vote of thanks to the President and secretaries.

DERMATOLOGY.

THURSDAY, AUG. 1ST.

Diet in the Etiology and Treatment of Diseases of the Skin.

An interesting discussion on this subject was opened by Dr. ALLAN JAMIESON (Edinburgh) and Dr. WALTER G. SMITH (Dublin). The former in his opening remarks directed attention, first, to the articles of food known to influence skin diseases; secondly, to the maladies of the skin which could be produced or modified by diet; and, thirdly, to dietetics as a means of treatment in dermatology. Some articles of food produced their effect at once, as in the example of shell-fish, and these acted probably by toxic conditions of the blood, though there was the remarkable and unexplained factor of idiosyncrasy which came into play. But far more frequently the action of foods was slow and prolonged, and their precise mode of action was even more difficult of explanation. Referring to certain articles of diet, Dr. Jamieson thought that alcohol seemed to produce a too ready penetrability of the skin, as witnessed by the liability to sweating and the clammy fingers of topers. Alcohol was not liable to produce skin diseases, but it certainly aggravated some disorders. Second in importance only to alcohol comes tea, and it has been shown that tea when taken too hot, too strong, and in excess causes cold hands and feet and a shrinkage of the integument, in addition to gastro-intestinal disturbance. Dr. White of Boston has shown that strawberries and other fruits containing acid in abundance are liable to produce eczema. Persistent omission of green vegetables from the dietary causes relaxation of the cutaneous vessels, and in extreme cases scurvy. It had long been known that persons presenting a pallor of the surface and other evidences of malnutrition and deficient food are predisposed to eczema. As regards the diseases of the skin influenced by diet, certain of them could be at once eliminated, such as parasitic diseases, scleroderma and most hereditary disorders, herpes zoster, and some others. But there remained a large number which are undoubtedly so influenced. Eczema could be produced and modified by unsuitable diet, drinking large quantities of cold water, and other articles. Dr. Jamieson mentioned hurrying over breakfast as a predisposing cause of the disease in school children. Psoriasis was aggravated by alcohol, and he had seen this disease invade the surface more rapidly under the administration of this article. The influence of diet on lichen planus had not been fully investigated, but this disease often arose in overfed, obese women. Boils were undoubtedly sometimes due indirectly to diet, although the disease was essentially a local one. A sudden change from a poor to a luxurious diet, or *vice versâ*, was capable of producing the malady. Acne is very often associated with a spare diet, such as that which schoolgirls were encouraged to take. Lupus is often associated with a distaste for fat. The cause of the increase of cancer during the last half century, as shown by Heath's statistics, was ascribed by Yeo to the increased consumption of butcher's meat, but he thought it ought rather to be ascribed to the undoubted increase in the consumption of tea. He thought that the abuse of this article during the period of growth was the cause of the increase of cancer. The subject of diet in treatment was a very large one. Very different diets were called for in the various diseases, always allowing for idiosyncrasy. Alcohol and the regulation of animal food-stuffs were the most important. The latter which contained iron were very important for the treatment of the anæmia which often accompanied acne and other skin affections.

Dr. WALTER G. SMITH read a thoughtful and humorous paper, stating at the outset that we have no certain knowledge of the real action of diet on conditions of the skin. It is difficult enough to trace the action of drugs, and still more difficult in the case of foods. The influence of diet in skin diseases was, he believed, much less important than is generally thought, and after all it might be best to adopt the rule that what most people eat agrees with them most, and what a healthy person finds appetising agrees with him best. There are, however, three ways in which food may perhaps influence skin conditions: 1. *By lowering the general nutrition*—e.g., in scorbutic and purpuric conditions, and those due to a parasite which finds in lowered vitality a more suitable condition for growth and multiplication. 2. *Reflex conditions*—e.g., from stomach to skin, as in over-eating or taking unsuitable food. These conditions were brought about either by a vaso-motor or a purely nervous mechanism. Urticaria and nearly all such skin conditions are known by their transitory character. They may be dealt with by a visit to Carlsbad, but may equally well be treated at home by purgatives, a good cook, and regulating the quantity and kind of the diet. 3. *Toxic conditions of the blood*—e.g., the effects of tinned or unwholesome foods, and the hyperæmia of the skin produced by full doses of alcohol. It must not be forgotten that the skin is the avenue for the elimination of certain substances—e.g., copaiba and other oleo-resins, and highly seasoned foods which are liable to produce erythematous rashes. Turning next to the different diseases of the skin, Dr. W. G. Smith thought they might be grouped into three classes: 1. Cutaneous diseases acknowledged to be influenced by diet, such as the erythemata, acne rosacea, and perhaps acne vulgaris. 2. Diseases which might possibly be influenced by diet, such as psoriasis and some cases of eczema, though he had never been able to satisfy himself that eczema was ever affected by diet. 3. Cutaneous diseases, which are certainly not produced or modified by food—e.g., herpes and lichen ruber. The effect of diet on leprosy had never been satisfactorily proved, nor, in his experience, had boils ever arisen or been modified by dietetic conditions. The fact that people now consumed 136 lb. of butcher's meat per head per annum, as compared with 46 lb. formerly, had been advanced as a cause for the increase of certain diseases; but he would point out that men probably consumed three-fourths more meat (and alcohol too) than women, and he would like to ask whether these diseases were three-fourths more common in the former. As regards salt meat, which was held to be so bad for skin diseases, he had given it to his skin patients without harm. Alcohol, undoubtedly, might sometimes increase the itching and congestion of the skin; but in reference to its supposed effect in producing skin diseases he would point out that the Parsees in India were not exempt from such maladies. If the skin disorder were secondary to diabetes, gastric or other derangements these, of course, must be treated; but as long as practitioners differed so widely and so oppositely it was impossible to believe that diet had any important effect on the skin condition itself. By way of summary Dr. W. G. Smith stated his belief—(1) that very few skin diseases were directly produced by food (though diet may aggravate some already in existence); (2) that the diseases so arising are always erythematous and transitory; (3) that diet has no influence on the cure of skin diseases, even of acne; and (4) that the only practical rules necessary are to exercise moderation and temperance in all things, and especially in alcohol, to regulate the bowels, and to cure the anæmia if present.

Dr. RADCLIFFE CROCKER agreed with Dr. W. G. Smith in thinking that the influence of diet had been exaggerated. He thought that salt meat and some other unwholesome articles acted chiefly by producing gastro-intestinal catarrh. The cooking and mode of preparation were even more important than the article. As regards the effect of alcohol, it differed widely in the different forms of alcohol; thus beer and port wine might do harm when well-diluted spirit would do good. Boils sometimes occurred in states of lowered vitality, sometimes in very healthy persons.

Dr. A. J. HARRISON (Clifton) agreed with Dr. Jamieson as regards the effects of acid fruits and the causation of boils; but as regards eczema he mentioned a patient who had been getting worse under a restricted diet, but who became rapidly well with a liberal and varied supply of food.

Dr. THIN adverted to the fact that tea was more largely drunk in China and Japan than in England, yet the inhabitants of those countries were not more troubled with the skin maladies said to be so produced.

Dr. MORGAN DOCKRELL believed emphatically that diet played a most important part in diseases of the skin. Amongst other maladies lupus might be mentioned. This disorder was rare amongst the Jews, and he thought the

circumstance might be accounted for by the careful inspection to which the meat was subjected preventing tuberculous meat being eaten.

Dr. MCCALL ANDERSON would not wish to minimise the importance of diet in the causes and treatment of skin diseases, but he rarely gave much heed to the diet of his skin patients. He did not think tea was likely to do much harm if properly prepared, but if taken too hot or too strong it might give rise to trouble, though this would be chiefly of the alimentary tract.

Dr. SAVILL, though agreeing generally with those who held that diet was not of great importance, wished to emphasise the effect of alcohol in skin maladies. He referred to Anstie's experiments on alcohol which showed that this substance produced vaso-motor dilatation of the dermal vessels and lowered oxidation of the tissues generally. In his experience the omission of alcohol from the dietary had frequently led to recovery from skin disorder of very long duration.

Dr. STOPFORD TAYLOR (Liverpool) and Dr. MYRTLE (Harrogate) also took part in the discussion, and Dr. JAMIESON and Dr. W. G. SMITH replied. The former wished to emphasise the fact that it was not diet *per se* which gave rise to boils, but sudden alterations in the dietary and mode of life which predisposed to them. The latter strongly deprecated the use of the word "gouty" applied to skin maladies as unscientific and unmeaning; and, referring to tea, said that after listening to the remarks that had been made about this dangerous article of diet, he could well understand the derivation of the word "gunpowder" as applied to a certain kind of leaf.

Lichen Planus Verrucosus.

Mr. GILBERT SMITH (Birmingham) read a paper on a case of Lichen Planus Verrucosus. A woman aged forty years was admitted to the Birmingham Lock Hospital on Feb. 4th, 1895, with a severe eruption on both legs and a slight eruption on both wrists. The rash had started eight months before as a small hard pimple like a corn, about the size of a pin's head, on the outer side of the right ankle. Other pimples rapidly appeared in the same region, forming a patch its present size—three inches in diameter. Over the front of the same leg other patches formed in the same way, hard papules also appearing between the patches and extending up the thighs. Three months later the left leg became affected in the same way, but to a less extent. On admission the patient was found to be well nourished, but had a greyish-coloured skin and an anxious expression of countenance. The eruption was confined to the legs and arms. Over the front and sides of both legs were a number of dark-brown patches, raised somewhat abruptly, their centres being much darker than their periphery. The patches varied in size from a pea to about two inches in diameter. The centres of these patches examined with a strong lens had the appearance of a group of closely packed horny plugs. Between these patches and extending more or less over the whole of both legs for some distance up the thighs there were inflamed hair follicles raised and tipped with hard, horny plugs. The eruption on the extensor surfaces of both forearms and wrists was slight, and composed of the typical angular patches of lichen planus. The patient suffered from severe neuralgic pains and irritation in both legs, especially at night. Severe cramps and sick headaches with vomiting troubled her daily. Her general health had been bad ever since the birth of her last child fourteen years ago. Her confinements had always been difficult. There was a marked history of uterine disease until relieved by an "operation." For eight months before admission she had suffered from severe headaches accompanied by vomiting, and every night she had had severe cramps and twitchings of the muscles of the legs. The case was interesting, first, as showing a probable cause of nerve exhaustion consequent on derangement of the generative system in a nervous temperament; secondly, on account of the extent of the eruption; and thirdly, in showing that the warty patches were derived from conical papules seated at the hair follicles, and not from flat papules. That the process is the same as lichen in planus is shown by the presence of a few typical flat papules in other and more usual positions.

Dr. RADCLIFFE CROCKER remarked that such cases were very interesting, as illustrating the follicular origin of these flat papules, and the patches which are built up by coalescence of papules around the sebaceous orifice. These cases also reveal the anatomical relationship of lichen planus—where the papules are usually flat, but may, as we now see, be acuminate—and pityriasis rubra pilaris, where the papules are usually conical, but may be flat.

Dr. NORMAN WALKER (Edinburgh) objected to the use of the word "verrucosus." Looking at the photographs, the papules were not excrescent and warty, but flat. A follicular papule due to hypertrophy of the cuticle should not be called warty, for a wart consisted of dermal overgrowth.

Mr. GILBERT SMITH, in reply, mentioned the extreme rarity of the affection. Out of 22,000 cases he had only seen this one.

The Treatment and Prognosis of Ringworm, based on the Physiology of the Trichophytons.

Dr. LESLIE ROBERTS (Liverpool) read an important communication on the Treatment and Prognosis of Ringworm, based on the Physiology of the Trichophytons. These organisms, he said, always affected the hair; and hair, considered scientifically, was the formed secretion of the cutaneous follicle. Chemically it was as remote from the living substance of the body as it was possible to be. It was unaffected by the soluble ferments, whether acting in an acid or alkaline medium. It was proof against the agents of putrefaction. In the mineral kingdom it was disintegrated and partially dissolved by certain substances whose action was considered by physiologists as analogous to the action of soluble ferments—namely, by strong acids and alkalies. There existed in the vegetable world a class of minute flowerless plants containing a ferment by whose agency hair could be more completely dissolved than by the strongest acids or alkalies. These minute plants were the keratolytic fungi.[1] Chemically speaking, ringworm consisted in the disintegration of the complex carbon-nitrogen compound, keratin, into a simple carbon compound and a nitrogen compound, which were assimilated by the fungus. It followed from these facts that when once the fungus had entered into the interior of the follicle it was master of the situation, since it possessed a power, which we did not, of digesting keratogenous tissues without employing the use of caustic agents. We were, therefore, at a complete disadvantage in our efforts to control the fungus. The lesson which we had to learn was that when once the fungus had entered into the interior of the follicle we ceased to have any further direct control over it. Dr. Leslie Roberts then entered upon the inquiry of the ways and means at our disposal for controlling the operations of the fungus. We had it completely in our power to prevent the development of fresh foci and the scattering of the fungus from one part to another, since the fungus always travelled from one follicle to another by the external surface; but when once the fungus had entered into the interior of the follicle we could influence its life only in an indirect way. This indirect therapeutic influence consisted in our power to artificially provoke proliferation of the living cells of the follicle and to excite the subjacent bloodvessels. After referring to some practical points in the anatomy of the hair follicle, Dr. Leslie Roberts entered upon the relationship of the fungus to the living hair-forming cells. He said its action was to inhibit the normal proliferation of the cells, and sometimes this inhibition was absolute for a time, as in tinea decalvans. It was just on these cells that our therapeutic influence could be brought to bear by means of irritants deposited upon the surface of the skin over the affected follicles. Under normal excitement physiological proliferation resulted, of course, in the formation of hair and the thin insoluble membrane (inner root sheath) lining the interior of the follicle. If the excitement went beyond physiological bounds proliferation became luxuriation, and pus was the result. The formation of pus commonly a useless product, was of great service in the morbid condition of the follicle now under consideration. The practical difficulty was how to control the suppuration. Pus, which resulted from inflammation of epithelium, was produced without any considerable loss of substance and without ulceration; but loss of substance and ulceration were invariably the result when pus was produced in connective tissue. Regarded in this light the problem of how to treat trichophytosis follicularis (ringworm) could be enunciated as follows: to excite the soft cells of the affected follicles to a physiological proliferation, or to a luxuriation (pus formation) which shall not pass beyond the limits of the epithelium. The remaining portion of the paper enlarged upon this theme and concluded with a summary of the present state of our knowledge of the pathology and therapeutics of the disease.

[1] The experimental proofs are given by Dr. Leslie Roberts in the Journal of Pathology and Bacteriology, vol. iii., July, 1895.

Adenoma Sebaceum.

Mr. WILLIAM ANDERSON narrated a case of Adenoma Sebaceum treated by Excision. The patient was a man aged twenty-seven years, in whom the disease had commenced when he was seven years of age with a few spots on each side of the nose, which grew and multiplied until a great portion of the face was covered. Spots of a different character had appeared on the trunk somewhat later. The family history was negative, and his health had always been good. On admission to hospital he had a large number of pale, brick-red papules varying in size from that of a millet-seed to a pea scattered over the face, but grouped most closely around the naso-labial and labio-mental furrows. Scattered over the trunk, but chiefly collected over the loins and scapulæ, there were a number of mollusca fibrosa, and also some irregular, slightly raised patches, apparently due to the same fibrous growth as the mollusca. There were no subjective symptoms, and the patient was of robust health and good average intelligence. He had never suffered from dyspepsia or any other variety of skin disease. He had been subjected to various kinds of treatment without result. The disease caused much disfigurement, and though it had been stationary during the past year it had shown no tendency to recede. An incision was made along the course of the naso-labial and labio-mental folds and the most conspicuous groups removed. The wound was closed with subcuticular sutures and dressed with iodoform and collodion. Some of the outlying patches were shaved off, and the rest left for a subsequent operation. Some fine linear, hardly noticeable scars resulted, and the loss of redundant tissue improved the contour of the face. Mr. W. Anderson remarked that the case resembled those recorded by others, but it might be noted that the man was of good intelligence and had never suffered from acne or dyspepsia. In the association with mollusca fibrosa it resembled one recorded by Dr. Vidal. The linear scars occupying the position of normal furrows were, he thought, a distinct improvement on the pitted cicatrices which invariably followed the application of galvano-cautery.

Alopecia Areata.

Dr. HENRY WALDO (Clifton) read a paper on Alopecia Areata. He wished to limit his remarks to the circumscribed as distinct from the universally diffused variety, which was generally regarded now as of tropho-neurotic origin. In view of the fact that no one micro-organism had been demonstrated in all or even in most cases of patchy alopecia, he could not subscribe to the parasitic theory of production. Atrophy of the follicle and its contents appeared to be the most constant condition present, and Dr. Waldo believed the cause was often overwork with too little sleep, combined with unsatisfactory hygienic conditions and general malnutrition; worry, anxiety, and nervous shock also played their part in some cases. He had obtained the best results by improving the patient's general condition and by the administration of cod-liver oil and arsenic—two remedies which are also useful in other neuroses—combined with rest and out-door life. Patients often get well without the application of a parasiticide or other local applications, a fact which strengthens the neurotic theory; but moderate stimulation of the more or less anæsthetic surfaces was often advantageous, as, for example, compound tincture of camphor well rubbed in and around the patches. He had not tried oxygen gas, but had used thyroid extract internally with uniformly negative results.

Dermatitis Repens.

Dr. STOWERS exhibited Coloured Drawings of Dermatitis Repens, illustrating a very severe and persistent case in a female. The disease commenced at the age of twenty-seven, forty-four years previously to her death from cancer of the stomach, and continued more or less severely during the whole period. He described in his paper the characteristic features of the ailment, and pointed out the grounds upon which it was accepted that dermatitis repens begins as a peripheral neuritis followed by secondary changes of an inflammatory nature completely destroying the whole structure of the skin. The thumbs of each hand were first involved, but after varying intervals the fingers and toes followed, the nails becoming detached and the matrices destroyed. The history of the case suggested an idiopathic origin, although the few cases previously recorded invariably followed injury to the fingers or hand, from the site of which the morbid process began. The patient was originally in the enjoyment of fairly good health, but occasionally suffered from acute gout, her father having been the subject of gouty trouble from early manhood until the time of his death. Concurrently with the dermatitis the condition known as "glossy" skin appeared and remained throughout. The affection spread towards the trunk, and at one time included the skin of the shoulders, chest, and abdomen in a lesser degree; but eventually this disappeared, leaving the hands and feet only involved. Dr. Stowers considered dermatitis repens to be best described as a spreading dermatitis denuding the epithelium by a slow process of disintegration, accompanied by irregular pustulation, discharging a serous or sero-purulent fluid, and spreading with an undermined and generally well-defined edge. The treatment of the case had proved unsatisfactory, the numerous remedies prescribed alike failing to arrest the disease.

Dr. EDWARD MACKEY (Brighton) read a paper on Cheiropompholyx in association with Eczema; Dr. FRANK H. BARENDT (Liverpool) read the notes of a case of Cheiro-Pompholyx.

The Etiology of Acute Pemphigus.

Mr. GEORGE PERNET read a paper on this subject, founding his remarks upon a fatal case of acute pemphigus which had recently come under his observation,[1] and stating that he had been able to collect four other very similar cases, all like his own, occurring in young journeymen butchers. In three, the disease was fatal in from ten to twenty-eight days. In two cases, one of which recovered, there was a distinct history of a wound, inflicted whilst dressing sheep's heads. He also alluded to two other cases. Adding the whole of the cases together (seven), including his own, no less than six terminated fatally, and in three there was a distinct history of an injury to the hands. In a second series of cases he had collected (eight in number), apart from butchers, but where the nature of the occupation brought the patient in contact with animals or dead portions of animals, the acute bullous eruption was fatal in five (four females, one male). In three of these eight cases there was a distinct history of injury to the hands, and in two others a whitlow of the finger was noticed on admission to hospital. The case of a man who attended horses and milked cows was specially interesting from the fact that the disease followed a wound of the hand and was contracted by inoculation from the teats of a cow. Mr. Pernet then touched upon bullous eruptions found in horses, cattle, &c. With regard to the bacteriology of the case which he had observed, a diplococcus had been found by Dr. W. Bulloch[2] which agreed with the organism first described by Demme, and more recently by Claessen. Mr. Pernet arrived at the following conclusions: (1) there was a group of rare cases of acute bullous eruption, accompanied by severe constitutional symptoms, and generally terminating fatally, which affected butchers; (2) the disease followed a wound of the hands or fingers, and (3) was probably due to a micro-organism; (4) the same etiological factors were probably at work in another group of very similar cases, and affected those who handled animals or dead portions of animals, such as hides, meat, &c. He suggested that in future the following points should be looked for in cases coming under observation: (1) occupation, (butcher, &c.); (2) history of a wound; (3) presence, or absence, of a characteristic micro-organism, i.e., Demme's diplococcus; and (4) contact with animals. In conclusion Mr. Pernet insisted on the importance of thoroughly disinfecting, with powerful antiseptics, all wounds of the fingers and whitlows in butchers and those handling meat, &c.

FRIDAY, AUG. 2ND.

This day was entirely set apart for the exhibition of patients. They were so numerous as to block the approach to the room where the meeting was held. Drawings and microscopic preparations were also shown, and there was a large attendance of members.

Exhibition of Cases.

Dr. COLCOTT FOX showed two cases and gave a short description of a Papulo-pustular (acneform) Eruption which he had met with in infants. The children shown, of whose cases the notes were read, were about seven or eight years of age, but it usually appeared in infancy or early childhood. The disease seemed to be a rare one, as he had only seen ten

[1] British Journal of Dermatology, April, 1895.
[2] British Journal of Dermatology, May, 1895.

cases. The eruption was an indolent, chronic papulo-pustular (acneform) rash and was disseminated over the body, though chiefly occurring on the extensor surfaces of the limbs, the upper part of the buttocks, and the face. The small papulo-pustules were seated about the hair follicles, being at first more or less acuminate in shape, but in the stages of involution they were flat topped, polished, puckered at the borders, and simulating lichen planus. There was a central plug in the follicle, and this often fell out, leaving a little crater. There was neither itching nor any other subjective symptom, but the disease seemed often to arise in debilitated subjects. The eruption had well-marked physical characters and distribution, all the cases presented precisely similar characters, and the disease might therefore be regarded as a distinct entity. One of the children was said to have had "snuffles," and in another there was a suspicion of syphilis in the mother. In two of the cases scrofulo-tuberculous nodules were present. Dr. Fox said the eruption was not amenable to antisyphilitic remedies, and he had never seen it in undoubted cases of syphilis. It could not be regarded as of syphilitic origin. On the other hand, the subjects of it might be called strumous and were sometimes tuberculous. He ranged the affection alongside a similar eruption termed "acne scrofulosorum," met with in older children and adults who were scrofulo-tuberculous. It was, however, probably not directly due to tuberculosis. It yielded to tonic treatment and cod-liver oil.

Dr. RADCLIFFE CROCKER remarked on the rarity of the affection, though he had met with and recorded cases, and emphasised the distribution of the eruption and its predilection for the face and buttocks as an important diagnostic feature. He had not observed any evidence of contagion. He preferred the name "acne scrofulosorum." It was undoubtedly the same disease which he had described under that name, and it was interesting to find from Dr. Fox's observations that the malady occurred in infancy as well as in childhood and adult life, at which times only he had seen it.

Dr. ALLAN JAMIESON thought that it was the same disorder as that of which he had published two cases in the *British Journal of Dermatology*, and that one of the illustrations in the New Sydenham Society's Atlas figured a similar disease, though it was labeled as a variety of molluscum contagiosum. He agreed that the disease was a distinct one, but preferred the name "acne varioloformis." In cases he had observed the crateriform depressions were well marked, but there was no pitting. In one instance, where two children of the same family were attacked, there was distinct evidence of infection. His patients had got well with boracic baths and salicin ointment. The disease was undoubtedly rare.

Dr. WALLACE BEATTY had seen a case in Dublin.

Dr. MORGAN DOCKRELL thought it a pity to call it acne, as it differed from this disease in its pathology. It seemed to him to be a papular disease of tuberculous origin.

Mr. MALCOLM MORRIS showed four cases: 1. A case of Symmetrical Scleroderma in an elderly woman, ulcerating in places. These ulcers might, he thought, be regarded as of trophic origin. They were, as usual, exceedingly painful. 2. An unusual form of Tuberculosis of the Skin, for which Mr. Morris proposed the name "lupus vulgaris erythematoides," for in some respects it resembled lupus vulgaris and in others lupus erythematoides. It was not symmetrical and did not attack the face as in the latter disease, but copied it in its process of repair. Mr. HUTCHINSON and Dr. MCCALL ANDERSON objected to the use of the term "erythematoides" in such cases, which in their main characters corresponded with lupus vulgaris. 3. Two cases of Leprosy. The first patient exhibited had been born in India and first noticed the disease in 1881, when ulcers began to appear on the fingers. In 1887 he first came under Mr. Morris's care, when there were patches of absolute anæsthesia and great atrophy of the phalanges of the feet and hands and wasting of the muscles, also ulcers due to pressure, a tuberculous appearance of the nose, and the typical drawn-up position of the hand. The second leprosy patient, aged forty-nine, had resided in Australia and India. The disease began in 1886 with patches over the back and elsewhere which were described as "erythema" at a London hospital where he went, and where the anæsthesia and paresis from which he suffered were supposed to be malingering. Nothing more definite appeared till January, 1893, shortly before he came under Mr. Morris's care upon his return to England. At that time he had ringed patches all over the back and chest accompanied by anæsthesia and paresis of the limbs. He was put on chaulmoogra oil and had taken from sixteen to twenty capsules a day of four minims each for a long while, altogether having taken some 10,000 capsules. Consequent on this the lightning pains from which he had suffered had entirely gone, the anæsthesia and ringed patches had disappeared, and the general health was extremely good. Mr. Morris thought the recovery might fairly be attributed to the oil. Mr. Hutchinson considered that residence in England was an important factor in the recovery of these cases, and mentioned a patient resembling this one who had been under his care and who got well while living a healthy life in England without any special treatment.

Dr. RADCLIFFE CROCKER (President) exhibited six patients: 1. Two cases of Morphœa or Circumscribed Scleroderma of the Fifth Nerve. 2. A case of Urticaria Pigmentosa occurring in a patient aged nine; it was an inveterate disease which usually begins in the first year of life, but which in this case began at the age of six. This child also exhibited well-marked urticaria factitia. She had improved under small doses of arsenic long continued. 3. General Scleroderma in the atrophic stage in a man aged thirty-nine who had suffered from the complaint for three years. The skin presented a nævoid condition in parts, and the fingers were drawn up and stiffened. He was recovering now and the sweat function was returning under Turkish baths followed by massage. 4. Psoriasis after treatment by salicylate of soda, 15 grs. three times a day. The treatment had been commenced on May 11th, and there was now great improvement. The patient had formerly been treated by thyroid extract, with only slight improvement, although he had had the great advantage of being in bed as an in-patient. 5. Xeroderma Pigmentosum in a patient aged twenty-one. It had begun as usual in the first year of life, and the brown spots had the usual distribution over the face and bust, and the alæ of the nose were scarred. A brother and a sister were similarly affected, only one out of a family of four escaping. Treatment had been unavailing. 6. General Alopecia of five years' standing in a boy five years old, on whom oxygen gas had been tried for three months with doubtful success.

Mr. GEORGE STOKER brought forward a little girl formerly the subject of Alopecia of about one month's duration, but who now had plenty of long white hair, consequent on treatment by oxygen gas. She had at first taken thyroid extract, one tabloid a day for three weeks, with no effect. She had worn the oxygen cap for two months with this beneficial result. Mr. Stoker thought the cause of failure in Dr. Crocker's case might be non-fitting of the cap. He had been induced to try it in alopecia because he found when treating ulcers that the cutaneous hairs beside the ulcer grew so rapidly. The child's hair had been becoming pigmented.

Dr. COLCOTT FOX exhibited three patients. 1. A case of Mycosis Fungoides in a man aged forty-six. The malady had commenced ten years previously with ill-defined eczematoid patches, which in the course of two years presented the typical appearance now seen—solid infiltrating fungating purple ovate tumours of variable size, ulcerating on the surface and situated chiefly on the arms. A general eczematous eruption was scattered between the tumours. 2. A case of Ulceration over the Manubrium of twelve years' duration, which from its characters Dr. Fox regarded as Rodent Ulcer, though its position was unusual. During the last two years he had met with two instances of this disease on the arm, one on the back, and one on the scrotum. 3. A case which might perhaps be regarded as a kind of Recurrent Summer Urticaria of a most intractable kind, and which had affected a boy aged eleven during the past six years. In winter the eruption was comparatively quiescent, but in summer it presented the appearance of rounded, raised erythematous papules the size of a split pea, sometimes, as on the face, becoming confluent, accompanied by itching and burning sensations. These wheal-like lesions were scattered over the body and limbs. There was a history of vesication, but he (Dr. Fox) had not observed it. He had seen several similar cases, and was doubtful whether the disease was to be regarded as a special variety of chronic urticaria or as a papular, erythematous, mild form of hydroa vacciniforme (Bazin) vel hydroa æstivale.

Dr. JAMES GALLOWAY exhibited a patient, a Polish Jew, suffering from Multiple Pigmented Sarcoma of the Skin which at one time had involved the limb with such large masses that amputation had to be performed. Now most of the pigmented, walnut-like growths had disappeared by natural

involution and only scarring was left. The patient had improved while taking arsenic, but the improvement had probably been spontaneous.

Dr. ABRAHAM COHEN also showed a case of supposed Multiple Sarcomatous Dermatosis in a Polish Jew involving the fronts of both legs. Circular, closely clustered, warty papules of a dark-brown colour could be seen spreading over the middle two-fourths of the skin of the front of the leg, being replaced in some of the central parts by whitish scar tissue the result of a cicatricial healing. This disease, Dr. Cohen said, was almost entirely confined to Central and Eastern Europe and did not affect Jews in other parts.

Dr. PYE-SMITH brought two cases to the meeting. 1. A case of Acanthosis Nigricans which presented certain interesting features. The disease had only appeared five or six years before, since which time the skin generally had assumed a deep bronze colour, but especially over the trunk. The characteristic pigmented warts (papillomata) were to be seen forming a patch on the side of the neck and on the abdomen. In youth the patient had had ulcers, probably tuberculous. Soft soap and warm water had much improved the patient's condition, but had not removed the disease. 2. A young, healthy soldier from India, with numerous Cysticerci under the Skin. A number of small globular tumours about the size of small beans, situated just beneath the skin in the subcutaneous areolar tissue, produced the idea that they might be lipomata, but the removal of one of them showed that they were cysts containing the characteristic fluid and hooklets; thirty or forty in number, they were scattered over the entire surface, though mostly on the legs, arms, and face.

Dr. ALFRED EDDOWES exhibited three patients. 1. A case of Eczema Palmare cured by an ointment consisting of acid. salicylic., 2 dr., ung. hydrarg. oleatis, ad 1 oz. The patient was a washerwoman who had been prevented from doing her work by the complaint for two years. She had been under treatment for three months, and was now able to resume her washing and other work. 2. A case of very chronic Eczema in a boy aged eleven. 3. A case of Angiokeratosis on the leg of a female patient aged fifty-four. There had originally existed a number of large varicose veins reaching from a short distance below the knee almost to the ankle. The disease, which consisted of a purple, horny surface, had been sharply defined and entirely confined to the skin over the veins. The affected parts had been treated with creolin as well as iodine, and the limb covered with zinc gelatine and bandages, one of which dressings had remained unchanged for many weeks. As the result of the treatment, and perhaps also of the disease, the varicosity of the veins had completely disappeared, and the leg appeared to be cured, a little redness and superficial scarring only remaining.

Dr. MORGAN DOCKRELL demonstrated two patients. 1. A case of Ichthyosis Hystrix (vel Sebacea) in a girl aged fifteen, who had, as is usual, had the disease since birth. It differed, however, from most cases in that the wart-like excrescences were confined to the face and scalp. Dr. Dockrell thought that it corresponded more or less with the sensory nerve distribution. 2. A case of Adenoma Sebaceum in a boy aged ten who had been affected ever since birth. It was chiefly on the face, being more on the left than the right side. Associated with this were telangiectodes and freckles, and some cicatrices were believed to indicate that some of the growths had undergone spontaneous involution. The disease was associated, as it not infrequently is, with epilepsy, and two attempts to procure specimens for microscopic examination had brought on fits.

Microscopical specimens of a Diplococcus which Mr. GEORGE PERNET had found in a case of Pemphigus were also exhibited.

A large number of drawings of different diseases were also shown, and Dr. F. M. SANDWITH (Cairo) exhibited some interesting photographs and water-colour drawings of patients suffering from Pellagra, a disease due to eating mouldy or diseased maize, which affects the poorer inhabitants of Egypt, who consume this as an article of food. The sketches showed well the pigmented erythematous patches, which appear only on those portions of the body and limbs exposed to the solar rays. The disease is well known in Northern Italy and elsewhere, but this is the first occasion of its having been reported from Egypt. Besides the skin the poison affects also the digestive and cerebro-spinal systems, and many cases of melancholia and dementia in the Italian lunatic asylums are now known to be due to this disease in a chronic form.

THE MUSEUM.

(Continued from p. 444.)

IV.—SANITARY APPLIANCES.

SANITARY appliances were not conspicuous quite by their absence, but rather by their somewhat meagre representation. Possibly this was on account of the pressure upon space, although of course we do not admit the secondary importance of the subject. Sanitation of a strictly medical kind, as that involved in surgical operations, midwifery, the aseptic treatment of wounds, and so forth, could not possibly be omitted in the demonstration of an exhibition of interest to medical men, but we should like to have seen more illustrations of practical sanitation, as, for example, the disinfection of clothing, of rooms, hospital wards, &c. The most important exhibit connected with this subject was undoubtedly that of Messrs. Defries and Son (Houndsditch), who showed the merits and demerits of various filtering media as illustrated in the chemical and bacteriological effect of these upon water. The Pasteur filter, which stands prominently out as having resisted more than any other form of filter the passage of pathogenic organisms through its pores, was submitted to inspection in various patterns severally suitable for table, travelling, service-pipe, cistern, and other purposes, while diagrams were on view showing the application of the Pasteur system of filtration applied on a large scale. Practical disinfection was represented in the ingenious "Equifex Spray Apparatus" for disinfecting rooms where steam is not available or cannot be applied, and in the Equifex saturated steam disinfector for operating theatres. Illustrations were shown also of the Equifex saturated steam disinfector at medium pressure for public disinfection stations, hospitals, &c., and of the Equifex valveless saturated steam disinfector at low pressure for small town stations, hospitals, casual wards, &c.; also of the Equifex boiling-pan for tuberculous sputa, linen, &c., giving a constant temperature of 100° C., and of the Equifex cleansing disinfectors for cattle markets, stables, &c.—all giving evidence of a thorough acquaintance with the developments of modern bacteriological research and of a practical knowledge of the real requirements of present day disinfection. Messrs. Defries and Son also explain the working of a convenient portable air-testing apparatus, designed by Dr. Scarfield, which enables the observer to obtain a fairly approximate estimate of the efficiency of the ventilation of any given space.

In addition to their well-known and comparatively innocuous but powerfully germicidal creolin preparations, the Jeyes' Sanitary Compound Co. (Cannon-street, E.C.) exhibited a sanitary appliance which, though not new on the Continent, is a novel introduction in this country. It consists of an automatic toilet-box for the watercloset containing papers impregnated with Jeyes fluid, which are delivered one at a time by an ingenious folding arrangement through an opening underneath. The method is one we should like to see generally adopted. Cresol is the basis of the powerful antiseptic fluid of Messrs. C. J. Hewlett and Son (Charlotte-street, E.C.), who also supply some excellent antiseptic jellies, containing 1 part per 1000 of corrosive sublimate combined with agreeable substances like thymol, eucalyptus, otto of roses, &c. An emollient antiseptic cream (in collapsable tubes), which is said to give instant relief in the itching of cutaneous diseases, belongs also to the list of useful antiseptic preparations of this firm. The list of Sanitas preparations is now so great as to comprise a complete antiseptic and disinfectant armamentarium. The composition of most of these is based on "Sanitas" (Sanitas Co., Bethnal-green), a deservedly popular, pleasant, and moreover active compound. The pocket sanitas disinfector, consisting of a small glass bulb enclosed in cotton-wool and containing a sanitas compound, is convenient for extempore use. The merits of the various sanitas soaps, exhaling the pleasant fragrance of sanitas and eucalyptol, have already been discussed in our columns.

Sulphur in various convenient forms (candles, cones, &c.) for disinfectant purposes was exhibited by the last-named firm and by Messrs. Macfarlan and Co. (Moor-street, E.C.), and also Messrs. Seabury and Johnson (Snow-hill, E.C.). Sanitary specialities were represented in the excellent display of towels, accouchement sets, sterilised dressings, &c., of Messrs. Southall and Barclay (Birmingham), whose successes in this branch of sanitation are well known; while the exhibit of the Peat Industries Syndicate (Queen

Victoria-street, E.C.) contained the peculiar and interesting products of peat fibre, which has proved so valuable as a surgical dressing,[1] and even for the manufacture of hygienic articles of furniture and clothing, as "hygienic socks," mattresses, sanitary covers, blankets, &c. Consistently with their reputation, Messrs. Duncan, Flockhart and Co. (Edinburgh) now produce a good soap superfatted to the extent of 3 per cent. It is prepared from the best materials, and is very agreeably and delicately scented. "Beaumol" soap, as it is called, is also made in the form of carbolic, coal-tar, and terebene soap. Last, but certainly not least, must be mentioned the patent wood-wool preparations (Hartmann) now manufactured solely by the Sanitary Wood-wool Co., Ltd. (Thavies-inn, Holborn-circus, E.C.). Eminently adapted for antiseptic and absorbent purposes in the treatment of wounds and of every kind of discharge, and cleanly to a degree, these preparations, dressings, &c., supply a want that was long unfulfilled.

V.—MINERAL WATERS, BEVERAGES, &C.

The mineral water industry was well represented, and it is a pleasure to record the strict measures and precautions that are now being taken by most respectable mineral water makers to ensure the utmost possible purity of the materials and water used in the production of this important class of beverage. On the stall of the Idris (Camden-town) exhibit, for example, were to be found the appliances necessary for the chemical and bacteriological examination of water, and for the assay of the carbonic acid gas. This company filter water and soften it by well-known means, the product in regard to colour comparing very favourably with distilled water. Admirable preventive measures are also taken to provide against metallic contamination. It is needless to add that the various aerated drinks made by this company—which, by the way, included piperazine water (as a diuretic and solvent for uric acid), and phenocoll hydrochloride aerated water (of stimulant, diuretic, as well as antipyretic characters)—were so grouped as to add very materially to the attraction of this exhibit. Opposite were the clear and bright mineral waters of the Chemists' Aerated and Mineral Waters Association—known in the trade as "Camwal"—(Gifford-street, N.), whose series of huge show syphons suggested the dangers of a bombshell or their application as fire extincteurs had they been charged. The soda, potash, and lithia waters are a decided feature of this firm, which may be relied upon to supply these in accordance with B.P. requirements.

Coming now to natural mineral table waters, not the least interesting was the natural seltzer water known as Catley Abbey water, drawn from the springs in Digby, Lincs, and bottled by the Catley Abbey Natural Seltzer Water Company at that place. It is a clean-drinking, bright, sparkling water, with refreshing saline taste and exhibiting an excellent composition. It deserves to be better known, and the fact that it is a "home production" should recommend it to not a few. We might apply the same remark to the Woodhall bromo-iodine spa waters, also of Lincolnshire, which have been beneficially employed in the treatment of glandular swellings and enlarged joints. The appointments for visitors at Woodhall Spa are, we learn, excellent, and suitable recreation is abundantly provided. Apollinaris (Stratford-place, W.) is too well known to need mention, as is also the proverbially soft Johannis (Regent-street, S.W.) water, both of which formed interesting exhibits in this section. Rosbach water (Messrs. Hertz and Collingwood, Sussex-place, Leadenhall-street, E.C.) is well adapted for table purposes; it is pleasantly sparkling, clean to the palate, and may be taken with confidence as a mild and agreeable antacid. We pass to the saline purgative waters, amongst which should be mentioned Condal water (Lambeth-hill, E.C.), of soft saline taste and only very moderately bitter, the amount of sulphate of soda present in it being in much larger proportion than the corresponding magnesium salt—a fact, it is said, which has rendered it useful and valuable to those with whom magnesium salts do not so easily agree; Æsculap (Messrs. Ingram and Royle, Farringdon-street, E.C.), largely used as a purgative because of its purity and comparatively neutral taste; Friedrichshall (The Apollinaris Co., Stratford-place, W.), the new spring yielding a water of undoubted therapeutic value; a bitter purgative water recently obtained by Messrs. Hertz and Collingwood (Leadenhall-street, E.C.) from a new spring in Budapest, which is unusually rich in mineral constituents and possesses excellent active medicinal characters; Vichy water (Messrs. Ingram and Royle, Farringdon-street, E.C.), renowned in the treatment of kidney complaints and of rheumatism; Grande Grille water for diseases of the liver and biliary organs; and a few others. Home medicinal waters were represented in the exhibit of the Harrogate Corporation, the specimens shown comprising the well-known strong and mild sulphur waters, and strong and mild chalybeate and saline waters, an interesting feature of the exhibit being the specimens of the mineral salts obtained on evaporation of a definite volume of the waters just described. The excellent appointments at Harrogate and the various bath-rooms and bath appliances were shown in an excellent series of striking photographs. The Leamington Town Improvement Association exhibited specimens of the waters of Leamington Spa, the composition of which closely resembles that of many Continental waters which are of reputed medicinal worth. The accommodation and appointments of the Royal Pump-room and baths at Leamington, which were reopened a few years ago, are of admirable design and to offer every comfort to visitors. In regard to mineral waters, Messrs. F. Newbery and Sons (King Edward-street, E.C.) make "lentiforms" of Vichy and lithia which are briskly effervescent when placed in water, producing, it is said, an exact representation of the natural waters, but in accurately adjusted medicinal quantity. We have already pointed out the unique character of the Flitwick chalybeate water, which contains a large proportion of oxidised iron held delicately in solution—a fact which doubtless accounts for its marked tonic properties. It forms a pleasant and refreshing drink combined with lemonade, the combination being called "Wikko" (The Flitwick Chalybeate Co., Borough High-street, S.E.). The arsenio-ferric water drawn from the Levico Springs in the South Tyrol (Messrs. Hertz and Collingwood, Leadenhall-street, E.C.) claims attention as a valuable therapeutic agent in anæmia, chlorosis, and in some skin affections. It is supplied in two strengths, the first (strong) containing $\frac{1}{10}$th gr. of arsenious acid in the pint and 34 gr. of soluble iron salts, and the second (mild) $\frac{1}{100}$th gr. of arsenious acid and 8 gr. of iron in the pint. It is said to be readily tolerated and not to cause disturbance of the digestive functions. The same firm, we notice, are introducing an excellent bitter and stomachic in the shape of a combination of high-class, old, matured Spanish wine (Jerez) with the active principles of choice cinchona bark. It presents tonic and restorative properties in a very palatable form, and is known as Jerezcona wine. The Laurent-Perrier Sans Sucre champagne (Messrs. Hertz and Collingwood) appears to be increasing in popularity, on which we reported analytically in THE LANCET of Jan. 13th, 1894. Despite the almost complete absence of saccharine substances, it possesses all the esteemed qualities of a natural high-class wine. This important fact is evidently being appreciated, and not least by the profession. Lastly, we may add to this list the exhibit of Messrs. Alexander Riddle and Co. (Commercial-street), who undertook the exhibit of Stowers' Lime Juice Cordial and the materials used in its preparation. It is a well-known wholesome beverage, and the peculiar pleasant fragrance of the lime seems to have been imprisoned very successfully in this firm's product.

VI.—MISCELLANEOUS.

Foremost in the rapidly diminishing space at our disposal we must mention some novel apparatus which we observed connected with methods of clinical testing. Messrs. Oppenheimer (Worship-street, E.C.), for instance, have recently introduced Fehling's test for sugar in bi-palatinoid form. On simply dissolving the bi-palatinoid in hot water Fehling's standard solution is obtained, which may conveniently be employed for the detection or estimation of sugar, each bi-palatinoid containing an equivalent of copper representing a definite amount of sugar. Similarly bi-palatinoids are prepared for the detection of albumen in urine by the ferrocyanide method. Messrs. Allen and Hanburys (Plough-court, Lombard-street, E.C.) exhibited Sir George Johnson's complete test cabinet for the quantitative estimation of albumin, sugar, and urea in urine, consisting of Johnson's picro-saccharometer, Esmarch's albuminometer, urinometer, &c., together with the necessary instructions. Useful apparatus, also for the use of medical men and students, including ureaometers, albuminometers, urine-testing cabinets, and bacteriological apparatus, were

[1] Vide THE LANCET, July 21st, 1894.

amongst the manifold collection of Messrs. Southall Brothers and Barclay (Birmingham). Messrs. Hewlett and Sons (Charlotte-street, E.C.) also exhibited some excellent apparatus in the same connexion, as well as the bismuth test for sugar, the trichloracetic acid test for albumin, the peptone test for bile salts, &c. The Medical Supply Association (Teviot-place, Edinburgh) exhibited also a urinary trial case and a simple instrument for the quantitative estimation of sugar in urine. Of other exhibits not easy to classify should be mentioned that of Messrs. Dowie and Marshall (Strand), who, it is well known, have given special attention to the design of boots for various requirements. This exhibit included designs in wood showing the means adopted for the treatment of flat feet; lasts constructed for contracted feet; boots and shoes made for the treatment of hammer toe; boots and shoes with dividing sole for straightening the great toe; a newly patented bandage boot for the treatment of weak ankles and flat feet; and, lastly, a simple and effective design for separating the great toe. Messrs. Price and Co. (Battersea, S.W.) showed their well-known pure soaps and sanitary soaps, while their exhibit, as a matter of course, included their glycerine, remarkable for its admirable purity, and which has now maintained its excellence for nearly half a century. "Transpirable" vests formed the chief exhibit of the Liverpool Lint Co. (Liverpool), who showed also flax and cotton lints, bandages, domette flannels &c., cotton wools, carbolised tows, protective lint, splint padding, &c. Their "transpirable" wool goods are worthy of marked commendation, since, as undervests, chest protectors, &c., this material allows evaporation of the exhalations of the skin and will not become cold and damp, it is said, even with profuse perspiration. A thick nap or pile is raised on one side of the material, which is of the finest lambswool, making it light, warm, and comfortable, and therefore exemplarily hygienic. Clinical figures and charts and an excellent series of lantern-slide physiological studies were on view at the exhibit of Messrs. Danielsson and Co. (Beaumont-street, W.), while some space was devoted to that most useful of articles, the label, together with sundry indispensables of the same order—midwifery record books, dispensary list and calendar, general case-book, bedside record, temperature charts, date pads, and so on, all of which were shown by Messrs. Silverlock (Knightrider-street, E.C.). We cannot conclude the list without reference to the "Ceres" automatic letter and card files (Messrs. Dawson, Bream's-buildings, Chancery-lane), which relieve the practitioner of much of the burden of keeping his correspondence "in decency and in order."

VII.—LITERATURE.

Books add very little to the brilliance of an exhibition, and this may be taken to be the reason why there were few booksellers represented. Messrs. Cassell and Co. (Ludgate-hill, E.C.) exhibited their well-known and useful series of manuals for students of medicine and the new work on "A System of Surgery," by Frederick Treves, F.R.C.S. Amongst Messrs. H. K. Lewis's (Gower-street, W.C.) announcements were "A Handbook of the Theory and Practice of Medicine," by Fred. T. Roberts, M.D., B.Sc., F.R.C.P.; "On the Treatment of Pulmonary Consumption," by Vincent D. Harris, M.D., F.R.C.P. (in the press); "Dental Materia Medica and Therapeutics," by James Stocker, L.D.S. (in the press); "Handbook of Diseases of the Ear for the Use of Students and Practitioners" (just ready); and several additions to Lewis's well-known Practical Series. Amongst recent issues of Mr. F. J. Rebman should be mentioned "A System of Legal Medicine," by Allan McLane Hamilton, M.D.; "Surgical Pathology and Therapeutics," by John Collins Warren, M.D., and Lawrence Godkin; while a Pictorial Atlas of Skin Diseases and Syphilitic Affections is in course of preparation, and will be published in twelve parts (each 10*s.* 6*d.*), the publication of the first part being promised soon.

Works also in active preparation by F. J. Rebman (Adam-street, Strand) are "Obstetrics," edited by R. C. Norris (admirably illustrated); "Physiology," edited by W. H. Howell, Ph.D., M.D.; and "Water-supplies," by J. C. Thresh, M.B. Vict., Ch.B., D.P.H. Camb., D.Sc. Lond. Messrs. Young J. Pentland (West Smithfield, E.C.) also exhibited a stock of well-known works; while a useful series of books was to be found on the shelves of the exhibit of the Scientific Press, Limited (Strand).

We are asked to state that the medical, surgical, and pharmaceutical antiquities exhibited by Messrs. Oppenheimer, Son and Co., Limited, at the Victoria Rooms, Savoy Hotel, and collected for them by Dr. Luigi Sambon of Rome, are their property and were collected by Dr. Sambon in discharge of a commission.

Medical News.

UNIVERSITY OF LONDON.—INTERMEDIATE EXAMINATION IN MEDICINE.—The following candidates passed in July, 1895:—

ENTIRE EXAMINATION.

FIRST DIVISION.

Battye, Walter Rothney, B.Sc., University College, Bristol and London.
Carr, Janet Waldegrave, London School of Medicine for Women.
Hartley, Harold Owens College.
Hawker, Alice Mary, London School of Medicine for Women.
Hine, Hugh Fitz Neville, Middlesex Hospital.
Singer, Harold Douglas, St. Thomas's Hospital.
Thiele, Francis Hugo, University College.
Wood, William Bird Herapath, Mason College.

SECOND DIVISION.

Adams, Edward William, Sheffield Medical School and Firth College.
Arnold, Frank Arthur, London Hospital.
Benham, Charles Henry, University College.
Berry, Thomas Percival, Guy's Hospital.
Brickwell, Frank, St. Bartholomew's Hospital.
Broadley, John, Yorkshire College.
Bull, Stanley Arthur, Westminster Hospital.
Cleveland, Arthur John, Guy's Hospital.
Cowie, Robert Macnamara, King's College.
Davies, David Lawford Francis, Middlesex Hospital.
Field, Richard Cullingworth, Yorkshire College.
Harston, George Montagu, Charing-cross Hospital.
Hawkesworth, Thomas A., King's College.
Hirst, William James, Yorkshire College.
Jamieson, Harold Henry, St. George's Hospital.
Jenkins, Herbert Stanley, University College, Bristol.
Jenkins, John David, London Hospital.
Leaning, Robert Craske, St. Mary's Hospital and Birkbeck Institute.
Leete, Frances Annie, London School of Medicine and Birkbeck Institute.
Lindsey, Colin Dunrod, St. Mary's Hospital and Birkbeck Institute.
Linton, Marion Sanford, B.A., London School of Medicine for Women.
Lloyd, Francis Seymour, St. Mary's Hospital.
Mooney, John, Owens College.
Page, John Basil, St. Mary's Hospital.
Sharman, Mary Nona, Glasgow University and London School of Medicine.
Sheldon, John Henry, Owens College.
Smallman, Arthur Briton, Owens College.
Smith, James Eckersley, University College, Liverpool.
Smith, Sidney Maynard, St. Mary's Hospital.
Swainson, James M. Graham, Westminster Hospital.
Taunton, Edgar, University College.
Telling, Walter Henry Maxwell, Guy's Hospital.
Tolputt, Arnold George, University College, Dundee, and Queen's College, Belfast.
Tyndale, Wentworth Francis, St. George's Hospital.
Watts, Eliza Turner, London School of Medicine for Women.
White, Harold Edward, Mason College.
Whitehead, Clarence Barns, St. Mary's Hospital.
Wiggins, William Denison, St. Mary's Hospital.
Williams, Percy Glyn Savours, University College.
Wilson, Alexander Gordon, London Hospital.
Wright, William, Owens College.

EXCLUDING PHYSIOLOGY.

FIRST DIVISION.

Rowe, William Trethowan, St. Bartholomew's Hospital.
Scott, Henry Harold, St. Thomas's Hospital.
Thwaites, Gilbert Bahn, St. Thomas's Hospital.
Wallis, James Garlit, London Hospital.

SECOND DIVISION.

Aveline, Henry Talbot Sidney, Bristol Medical School and Clifton Laboratory.
Belt, Francis Victor Owen, St. Bartholomew's Hospital.
Cridland, Arthur Bernard, Bristol Medical School and Clifton Laboratory.
Crisp, George Bedford, St. Mary's Hospital.
Handson, Lionel Edwin Charles, Guy's Hospital.
Jones, John Llewelyn, University College.
Mawson, Joseph Arthur, Yorkshire College.
Schölberg, Harold Alfred, St. Bartholomew's Hospital.
Smith, Sidney Robert, Westminster Hospital.
Stock, William Stuart Vernon, University College, Bristol, and Clifton Laboratory.
Whitfield, Lorenzo, Mason College.
Woodbridge, Elliot Wilson, St. Bartholomew's Hospital.

PHYSIOLOGY ONLY.

FIRST DIVISION.

Baker, Alfred Eaton, Middlesex Hospital.

SECOND DIVISION.

Barnes, John Arthur Percival, St. Bartholomew's Hospital.
Bletchly, George Playne, Middlesex Hospital.

East, William Norwood, Guy's Hospital.
Hall, Edmund Stokes, Guy's Hospital.
Hunt, Edward Lewis, St. George's Hospital.
Lansdown, Charles Ewbank, St. Mary's Hospital.
Marriage, Herbert James, St. Thomas's Hospital.
Maxwell, James Laidlaw, St. Bartholomew's Hospital.
Moore, Percy William, Guy's Hospital.
Winterburn, Joseph Williamson, St. Thomas's Hospital.

N.B.—The names of candidates who have obtained honours do not appear in the above list.

EXAMINATION FOR HONOURS.

ANATOMY.

FIRST CLASS.

Fagge, Charles Herbert (Exhibition and Gold Medal), Guy's Hospital.
Walker, Frederick Edward (Gold Medal), Guy's Hospital.

SECOND CLASS.

Dewhirst, Wilfred Arthur, Yorkshire College.
Sherlock, Edward B., B.Sc., Westminster Hospital.

THIRD CLASS.

Morland, Egbert C., B.Sc., Owens College and St. Bartholomew's Hospital.
Dixon, Montague, B.Sc., University College.
Hewitt, Harry Edward, St. Thomas's Hospital.

PHYSIOLOGY AND HISTOLOGY.

FIRST CLASS.

Morland, Egbert Coleby (Exhibition and Gold Medal), Owens College and St. Bartholomew's Hospital.
Kelsall, Robert (Gold Medal), Owens College.
Walker, Frederick Edward, Guy's Hospital.

SECOND CLASS.

Dobson, Joseph Faulkner, Yorkshire College.
Dykes, Campbell, University College.
Sherlock, Edward Birchall, Westminster Hospital.
Richmond, G. E., B.A., B.Sc., Guy's Hospital and King's College.

THIRD CLASS.

Cornford, Mary Frances, London School of Medicine and University College.
Turner, Philip, B.Sc., Guy's Hospital.

ORGANIC CHEMISTRY.

FIRST CLASS.

Pierce, Robert Wynn Charles, B.Sc. (Exhibition and Gold Medal), St. Thomas's Hospital.

SECOND CLASS.

Turner, Philip, Guy's Hospital.
Milton, William Tayler, Guy's Hospital.
Morland, Egbert Coleby, Owens College and St. Bartholomew's Hospital.
Sherlock, Edward Birchall, Westminster Hospital.
Richmond, George Ernest, Guy's Hospital and King's College.

THIRD CLASS.

Bruce, Harold Wilson, Guy's Hospital.
Nabarro, David N., B.Sc., University College.

MATERIA MEDICA AND PHARMACEUTICAL CHEMISTRY.

FIRST CLASS.

Turner, Philip (Exhibition and Gold Medal), Guy's Hospital.
*Sherlock, Edward Birchall, Westminster Hospital.
Milton, William Tayler, Guy's Hospital.
Walker, Frederick Edward, Guy's Hospital.

SECOND CLASS.

Pierce, Robert Wynn Charles, St. Thomas's Hospital.
Gardner, Thomas Hudson, King's College.
Hewitt, Harry Edward, St. Thomas's Hospital.

THIRD CLASS.

Bruce, Harold Wilson, Guy's Hospital.
Cornford, Mary Frances, London School of Medicine and University College.
Fagge, Charles Herbert, Guy's Hospital.

* Obtained the number of marks qualifying for the Exhibition.
N.B.—The bracket denotes equality of merit.

The following candidates passed the Preliminary Scientific (M.B.) Examination in July, 1895:—

ENTIRE EXAMINATION.

FIRST DIVISION.

Addey, William Fielding, University College.
Bailey, James Connor Maxwell, St. Bartholomew's Hospital.
Bartlett, Albert William, University College, Aberystwith.
Boeddicker, Hans Frederick William, King Edward's High School, Birmingham, and Mason College.
Bullen, Charles Henry, Mason College.
Butler, James Alfred, Guy's Hospital.
Camps, Percy William Leopold, Guy's Hospital.
English, Thomas Crisp, University Tutorial College.
Ford, Harriet Rosa Delo, Owens College.
*Greenwood, William Osborne, private study.
Hamilton, Louisa, University College.
*Hare, George William, Guy's Hospital and Blenheim House.
Johnson, Robert George, University College, Bristol.
*Jones, Bernard Watson, King Edward's High School, Birmingham, and Mason College.
Lewin, Jessie Augusta, University Tutorial College.
McDougall, Olive, Owens College.
*McGavin, Donald Johnstone, King Edward's High School, Birmingham, and Mason College.
Martin, John Ranald, Middlesex Hospital and University College.
*Mason, Edward Daniel, Mason College.
Parkinson, Arthur Stanley, Yorkshire College.
Penny, Charles Burnage, Guy's Hospital and Alwyne Institute.
Ridout, Charles Archibald Scott, St. Bartholomew's Hospital.
Roberts, Bernard H. St. Clair, University Tutorial College and private study.
Rutherford, Richard, University Tutorial College and private study.
Seccombe, John William Smyth, private study and St. George's Hospital.
Soutter, Charles Duncan, King Edward's High School, Birmingham, and Mason College.
Thackray, Christopher, Firth College.
Wilmersdoerffer, Gisela, University Tutorial College.
Wrench, Guy Theodore, Guy's Hospital.

SECOND DIVISION.

Barnett, Emily Bonnycastle, Bedford College, London.
Bott, Percival George Albert, St. Mary's Hospital.
Brodribb, Charles Hildred, St. Mary's Hospital.
Carlé, Frederick Charles, King's College.
Collinson, Harold, Yorkshire College.
Cook, Lewis, Westminster Hospital and private study.
Dickson, Louis Edington, University College, Liverpool.
Edwards, Francis Robert, King Edward's High School, Birmingham, and Mason College.
*Elliott, Athol Garnet, University College.
Evans, William Thomas, University College, Cardiff.
Fox, Adam, Queen's College, Cork, and private study.
Freear, Alexander, St. Mary's Hospital.
Gale, Caroline Lilian, University College.
Greenfield, Dudley George, Guy's Hospital.
Guest, Leslie Haden, Owens College and private study.
Günther, Charles Frederick, B.A., Firth and University Colleges.
*Hampshire, Florence Elizabeth, Yorkshire College.
Hirst, Walter Clapham, Yorkshire College.
Holyoak, Ernest William, Wyggeston School.
Hunt, John William, St. Mary's School.
Ivens, Mary Hannah Frances, University Tutorial College.
Jackson, Sophia Bangham, University College, Aberystwith.
James, Henry Walter, University College, Cardiff.
John, Ambrose Hilton, St. Bartholomew's Hospital.
Jones, Ernest Williams, Mason College and private study.
*Law, William Jackson, Firth College and Kingswood School.
*Lewin, George, City of London School and University Tutorial College.
Lister, Alfred Ernest John, St. Bartholomew's Hospital.
Lloyd, Brinley Richard, University College, Cardiff.
Longhurst, Frederick William, University College and private tuition.
Marshall, James Cole, St. Bartholomew's Hospital and private tuition.
Maw, George, University College.
*May, John Percy, St. Bartholomew's Hospital and Central Foundation School.
Mooney, Annie, Owens College.
Parrott, Hugh McDowall, Guy's Hospital and Carlyon College.
Phillips, Mary Elizabeth, University College, Cardiff.
Pridham, Arthur Tregelles, St. Bartholomew's Hospital.
*Reaney, Michael Foster, London Hospital.
Reeve, Ernest Frederick, Aske's Schools, Hatcham.
Reynolds, Bryan Ellis, University Tutorial College, Birkbeck Institute, and private study.
Richardson, Catherine Mary, Durham College of Science, Newcastle-on-Tyne.
Rowntree, Hilda Mallinson, University College.
Scholefield, Harry, Owens College.
Smith, Edgar Dyke, St. Bartholomew's Hospital.
Stuart, William Lumsden, King's College.
Tattersall, John, Birkbeck Institute and University Tutorial College.
*Tchaykovsky, Barbara, North London Collegiate School and Bedford College.
Thornley, Robert Lewis, St. Bartholomew's Hospital.
Welchman, Frank Ernest, University Tutorial College and private study.
*Widdows, Sibyl Taite, Dulwich High School and University Tutorial College.
Wrigley, Philip Roscoe, Owens College.

HONOURS CANDIDATES RECOMMENDED FOR A PASS.

Fry, Walter Burgess, St. Thomas's Hospital.
*Williamson, John Samuel, St. Bartholomew's Hospital.

CHEMISTRY AND EXPERIMENTAL PHYSICS.

Amsler, Albert Maurice, St. Paul's School.
†Barron, Robert Macpherson, Guy's Hospital.
Beattie, Frederick Alexander, Guy's Hospital.
Bernstein, Julius Meyer, Owens College.
Birch, Anthony, University Tutorial College and private study.
Bonallo, William, Rutherford College, Newcastle-on-Tyne, and private study.
†Bridger, James Frederick Edmund, St. Mary's Hospital.
Brown, Herbert William, University Tutorial College.
Butcher, William James, Owens College and private study.
Caddy, Adrian, St. Paul's School.
Calcott, James Douglas Clives, Grammar School and University College, Bristol.
†Chapman, John Ellis, Firth College.
Churchill, John Aylward, University College and St. George's Hospital.
†Coleridge, Alfred, University College, Bristol, and private study.
Cope, Gilbert Edgar, Westminster Hospital and private study.
Dainow, Samuel, Guy's Hospital and private study.
De Pass, Jeannette Rachel, Alwyne Institute.
†Dobson, Margaret Bernard, University College.
Elliott, Arthur Forbes, Oundle School.

Evans, George, University Tutorial College.
Forsyth, David, Guy's Hospital.
Goodall, Joseph Strickland, City of London College and private study.
†Graves, David Sydney, Alwyne Institute.
Hardy, Horatia Daisy, Bedford College, Battersea Polytechnic, and private tuition.
Hatrick, Charles Dainty, University College.
Hodgkin, Henry Theodore, Leighton Park School, Reading.
†Holland, Laurence, King Edward School, Birmingham.
†Ingram, Percy Cecil Parker, University College, Cardiff.
Izard, Alfred Francis, Cranleigh School.
†Jones, David Thomas Cadvan, Grammar School, Weston-super-Mare.
Kiddle, Horace Harvard, Dulwich and University Tutorial Colleges.
†Klein, Joseph, private study.
Lacey, Hugh Kirbell, Guy's Hospital.
†Lewis, William Edward V., Mason College.
Lindsey, Edward Vaughan, St. Bartholomew's Hospital.
Little, John Wishart, University Tutorial College.
†Löwe, Otto William Axel, University College, Liverpool, and private tuition.
†Male, Maurice Taylor, University Tutorial College.
Manfield, George Herbert Hind, University Tutorial College and private study.
†Mennell, Zebulon, private tuition.
†Miller, Thomas Davidson, University and University Tutorial Colleges and private tuition.
Minkley, Henry Richmond, Mason College and private tuition.
Niall, Eugene Michael, University Tutorial College.
Norton, Robert Charles, B.A., University College, Nottingham, and private study.
Paramore, William Erasmus, Merchant Taylors' School.
Pearson, Arthur, Guy's Hospital.
†Pierce, John James, private study.
†Pocock, Arthur Robert George, University College.
Prall, Edward, Merchant Taylors' School.
Rees, Morgan James, Guy's Hospital.
Stormont, James Henry, Mason College.
Tattersall, Harold, Guy's Hospital.
Taylor, George Orissa, London Hospital.
Thomas, Arthur Hitchings, University College, Cardiff.
Trail, David Herbert, Dulwich College.
Turner, Douglas Duke, Epsom College.
Utley, John Ernest, Owens College.
Wall, Vivian Francis, University Tutorial College.
†Wallbridge, Stephen Edwin J., St. Mary's Hospital.
Waller, Arthur Beaumont, Alwyne Institute.
Ward, Herbert Septimus, University College, Cardiff.
Watson, Robert Nimmo, Westminster Hospital.
Wellby, Alexander Sinclair, St. Thomas's Hospital.
Wetherell, Frank Cordeux, Guy's Hospital.
Williams, Alfred Carleton, King's College.
Wilson, Frederick Ernest, Alwyne Institute.
Woodwark, Arthur Stanley, University Tutorial College and private study.

BIOLOGY.

†Betts, Alfred John Vernon, Westminster Hospital.
†Black, Guy, St. Thomas's Hospital and University Tutorial College.
†Blythe, Thomas Thompson, University Tutorial College.
†Boissière, Felix Anthony, King's College.
Brown, Allen Bathurst, St. Bartholomew's Hospital.
Burgess, Amy Jane, London School of Medicine, University Tutorial College, and private tuition.
Drew, William Sydney, Epsom College.
†Ede, Alfred Gordon, St. Bartholomew's Hospital.
Evans, Joseph William, University College, Aberystwith.
Forsyth, John Andrew Cairns, Yorkshire College.
Fraser, Sarah Louise, Bedford College, London.
Harris, Frederic Rosenberg, St. Mary's Hospital.
Harvey, Percival George, St. Bartholomew's Hospital.
Hayden, Arthur Falconer, St. Mary's Hospital and private study.
Hocken, Herbert Castleman, Kingswood School.
Hutchinson, Margaret Ethel, University Tutorial College.
†Jones, Bertram Seymour, University Tutorial College.
Jones, Evan Tudor, University College, Aberystwith.
†Leah, Thomas, St. Mary's Hospital.
McEnery, William Augustine, Middlesex Hospital and University College.
Marshall, Arthur Thomson, King's College.
†Marshall, Charles de Zouche, University Tutorial College.
Marval, Alice Marietta, University College.
Mecklenburg, Agnes Emma, University College.
Moore, Helen, University College.
†Moxon, Henry Vidal, private tuition.
Nelson, Emily, University College, Liverpool, University Tutorial College, and private study.
†Nitch, Cyril Alfd. Rankin, St. Thomas's Hospital and private tuition.
†Orford, Thomas Christian, Owens College.
Page, William Sydney, St. Mary's Hospital.
†Payne, William, Carlyon College.
Pearce, Thomas Massey, St. Bartholomew's Hospital.
Pearse, Margaret Isabelle, Alwyne Institute.
Pickin, Frederic Harold, University College, Bristol.
Rooke, William Stanley, University College.
Savill, Philip, University College.
†Selous, Cuthbert Fennessy, St. Thomas's Hospital.
Smith, Douglas Wilberforce, Edinburgh University and School of Medicine.
Soltau, Alfred Bertram, London Hospital.
†Stallard, Nigel Frampton, University and University Tutorial Colleges and private study.
Stannus, Hugh Stannus, St. Thomas's Hospital and private study.
†Stilwell, Archibald James, private study and University Tutorial College.
Storr, Florence, Dulwich High School and University Tutorial College.
Syms, John Kendall, University College.
Trubshaw, Kenneth Vincent, Epsom College.
Ward, George Stafford, London Hospital and private study.
Wethered, Ernest, St. Bartholomew's Hospital.
Wood, Frank Herbert, St. Bartholomew's Hospital.
Wood, Maurice Dunbar, Guy's Hospital.
Wyld, Ellen Elizabeth Janet, Westfield College.

* These candidates have also passed in the Mathematics of the Intermediate Examination in Science, and have thus become admissible to the B.Sc. Examination.
† These candidates have now completed the examination.
N.B.—The names of candidates who have obtained honours do not appear in this list.

The following candidates passed the Intermediate Examination in Science (1895):—

FIRST DIVISION.

Allen, Arthur Hinton, private study.
Allen, George Pethybridge, private study and Craigmore College, Bristol.
Beale, Hanway Richard, St. Thomas's Hospital.
Beckton, Henry, Clare College, Cambridge, and University Tutorial College.
Bell, Herbert George, B.A., St. Peter's, Cambridge, University Tutorial College, and private study.
Belton, Frank, private study and Manchester Technical and Central Board Schools.
Berridge, Emily Mary, Bedford College, London, and Royal Holloway College.
Borchardt, Walter Gustav, St. John's College, Cambridge.
Borrow, Frederick Charles, St. Bartholomew's Hospital and private tuition.
Buller, Arthur Henry Reginald, Mason College.
Caudwell, Ben, B.A., private study and University Tutorial College.
Clark, John Alexander, University College, Aberystwith.
Cook, Sydney George, Sidney Sussex College, Cambridge.
Curgenven, Arthur Joseph, St. Paul's School.
Dalton, John Edwin, Yorkshire College.
Edward, James Mitchell, private study.
Forster, Martin Onslow, University Tutorial College.
Gardner, Thomas Jevons, School of Science, Kidderminster, and private study.
Godfrey, Alfred Robert, University College, Nottingham.
Hartle, Hilda Jane, King Edward's High School, Birmingham.
Harvey, Charles John, B.A., private study.
Heaton, Ellis Wright, Yorkshire College and Huddersfield Technical School.
Heitefusz, Hermann Wm. U., private study and St. John's College, Battersea.
Houghton, Robert Harold, Birkbeck Institute.
Huntly, George Nevill, private study and Royal College of Science.
Jack, George, private study and Glasgow Technical College.
Jones, Harry Walton, University College, Aberystwith.
Jones, Humphrey Owen, University College, Aberystwith.
Kent, George Joseph, University Tutorial College and private study.
Lawn, James Gunson, Royal College of Science, private study, and University Tutorial College.
Lewis, Edward Watkin, Aske's School, Hatcham.
Marshall, Bouchier M. Cole, Royal College of Science.
Matthews, Gay Frederick, private study.
Moore, Harold, Middlesbrough High School.
Morland, Helen, Croydon High School.
Neumann, Edgar David M., Balliol College, Oxford.
Nunn, Henry Thomas, University Tutorial College and private study and tuition.
Orme, Philip, University College and Polytechnic Institute.
Paramore, Richard Horace, Merchant Taylors' School, University Tutorial College, and private study.
Parkinson, Alfred Howard, private study.
Pearce, Harold, University Tutorial College.
Picknett, William Allen, Royal College of Science and University Tutorial College.
Pinchin, Ernest Alfred, Birkbeck Institute and private study.
Potts, Ernest Henry, B.A., private study and Birkbeck Institute.
Prince, Henry, Westminster Training and University Tutorial Colleges.
Richardson, Harold Ernest, B.A., private study.
Rowntree, Ernest William, Owens College.
Rylands, Louis Gordon, B.A., private study and University Tutorial College.
Sherlock, Robert Lionel, private study.
Skeats, Ernest Willington, Royal College of Science and private study.
Sprankling, Charles Henry Graham, University College, Bristol, and private study.
Watts, William Herbert, private study.
Whiting, Thomas, University College, Aberystwith.
Winckle, Edward William, King Edward's High School, Birmingham, and Mason College.
Woodhead, Francis John, Yorkshire College.
Worth, Henry John George Rogers, Yorkshire College and private study.

SECOND DIVISION.

Adams, Sophia G. Louisa, University College, Aberystwith.
Ashby, Blanche Mary, University College, Cardiff.
Battersby, Albert, private study.
Bennett, George Richard, University College, Cardiff.
Bigby, Agnes Grace Doull, Westfield College.
Bird, George Arthur, University Tutorial College, Birkbeck Institute, and private study.
Blandy, Wilfrid Boothby, High School and University College, Nottingham.
Brown, Frank William Radford, St. John's College, Green-lanes, and private study.
Brown, John, private study.
Clegg, Harold Fielding, University College, Aberystwith.

Coates, John Victor Hubert, City and Guilds Central Institute and private study.
Crosland, Zachariah Drake, Technical School, Huddersfield, and private study.
Crosskey, Alexander Nash, City and Guilds Institute and University Tutorial College.
Crossland, Cyril, Windermere Grammar School.
Daniel, Vincent, University College, Cardiff.
Drennan, William St. George, private study.
Edwards, William Buckland, private study and University Tutorial College.
Evans, David, private study and University Tutorial College.
Firth, John Shaw, Firth College.
Fuller, Frank Joseph, B.A., Fitzwilliam Hall, Cambridge University.
Gillmore, Thomas Parker, Hazlecroft, Weston-super-Mare, and University College, Bristol.
Goldie, Ellis Gordon, University College, Birmingham, and private study.
Goodwill, Gustave, University Tutorial College.
Herald, Hartley Davy, private study.
Hogg, Herbert Ernest, private study.
Lambshead, William Samuel, B.A., private study and University Tutorial College.
Lathwood, Arthur, Mason College.
Lloyd, John Bennett, Haberdashers' Schools, Hoxton, University Tutorial College, and private study.
Lowndes, Louis, University College, Nottingham, and private study.
Newton, William Henry, University College, Nottingham.
Nott, Gilbert Harwood, University College, Aberystwith.
Orwin, Annie, Royal Holloway College.
Parkinson, John Harold, B.A., University College, Aberystwith.
Parsons, Arthur Ambrose, private study.
Powell, John, Goldsmiths' Institute and private study.
Rawlinson, Percy, Yorkshire College and private study.
Sheard, Gertrude, Westfield College.
Shields, Leonard, Firth College.
Smiles, Samuel, University College.
Sterling, Samuel Frederick, Battersea Polytechnic.
Watson, George, B.A., University College.

HONOURS CANDIDATES RECOMMENDED FOR A PASS.

Aston, Stafford, University College and private tuition.
Briggs, John, private tuition and University College.
Hall, Emma, Royal Holloway College.
Hodgson, Stanley, Guy's Hospital.
Jackson, Henry, Downing College, Cambridge, and Bury Grammar School.
Laws, Arthur Robert, Durham College of Science, Newcastle-on-Tyne.
Ormond, Sidney James, Guy's Hospital and University Tutorial College.

N.B.—The names of candidates who have obtained honours do not appear in this list.

EXAMINATION FOR HONOURS (INTERMEDIATE SCIENCE AND PRELIMINARY SCIENTIFIC (M.B.) CONJOINTLY).

INORGANIC CHEMISTRY.

FIRST CLASS.

Parrish, Samuel, Int. Sc. (disqualified by age for the Exhibition), Royal College of Science, Yorkshire College, and private study.
‡Hill, Charles Alexander, Prel. Sc., Pharmaceutical Society, King's College, St. Thomas's Hospital, and private study.
Howard, Albert, Int. Sc., Royal College of Science.
‡Wynn, William Henry, Prel. Sc., Mason College and private study.

SECOND CLASS.

Miller, Ernest Alfred, Int. Sc., Guy's Hospital.

THIRD CLASS.

Morgan, David J., Prel. Sc., St. John's College, Cambridge.
Dixon, Edwin Henry, Int. Sc., Merchant Venturers' Technical College, Bristol.
Platt, P. Polding, Int. Sc., private study.
Clark, Ernest, Int. Sc., Firth College and Central Hall of Science, Sheffield.
‡Mankiker, R., Prel. Sc., University College and private study.
Humphrey, Edith E., Int. Sc., Bedford College, London.
More, Andrew, Int. Sc., Royal College of Science, University Tutorial College, and private study.

EXPERIMENTAL PHYSICS.

FIRST CLASS.

Starling, Sydney George, Int. Sc. (Neil Arnott Exhibition and Medal), Royal College of Science and University Tutorial College.
*†Melton, G. R., Int. Sc., Royal College of Science, University Tutorial College, and private study.

SECOND CLASS.

Drysdale, Charles V., Int. Sc., Finsbury and City Guilds, Birkbeck Institute, and private study.

THIRD CLASS.

Brooks, Ernest E., Int. Sc., private study.
Adams, Walter, Int. Sc., Firth College.
Griffith, Owen W., Int. Sc., University College, Bangor.
Watkin, Paul I., Int. Sc., King Edward's School, Birmingham, and Mason College.
Whittington, S. W., Int. Sc., Sheffield Royal Grammar School and Firth College.

BOTANY.

FIRST CLASS.

Ivyman, William George, Int. Sc. (Exhibition), Royal College of Science and St. Olave's Grammar School.

SECOND CLASS.

‡Sollas, Igerna B. J., Prel. Sc., Royal College of Science, Dublin, and Alexandra College.

THIRD CLASS.

Terry, Herbert, Prel. Sc., Owens College.

ZOOLOGY.

FIRST CLASS.

‡Kelly, Agnes, Preliminary Science (Exhibition), University and Bedford Colleges, London.
Lindsey, A. B., Prel. Sc., University, St. Thomas's Hospital, and Birkbeck Institute.

SECOND CLASS.

Singer, Charles Joseph, Prel. Sc., University College.
‡Sollas, I. B. J., Prel. Sc., Royal College of Science, Dublin, and Alexandra College.
Scroggie, W. R. J., Prel. Sc., Islington High School and Birkbeck Institute.

THIRD CLASS.

Savage, T. C., Prel. Sc., University College.

* Obtained the number of marks qualifying for the Exhibition.
† Disqualified by age for a "Neil Arnott" Medal.
‡ These candidates have also passed in the Mathematics of the Intermediate Examination in Science, and have thus become admissible to the B.Sc. examination.
N.B.—The bracket denotes equality of merit.

UNIVERSITY OF EDINBURGH.—On Aug. 1st the following candidates were recommended to receive the degrees named below:—

THE DEGREE OF DOCTOR OF MEDICINE.

†Allison, J., M.B., C.M.
*Anderson, J. S., M.B., C.M.
Anderson-Berry, D., M.B., C.M.
Barnes, A. R., M.B.
Battersby, J. H., M.B., C.M.
Bond, C. H., M.B., C.M.
†Cameron, G. C., M.B., C.M.
Carruthers, E. J. W., M.B., C.M.
Clayton, J. S., M.B., C.M.
Connor, F. G., M.B., C.M.
Crawford, W. T., M.A., M.B., C.M.
*Davies, R., M.B., C.M.
Dennison, A., M.B., C.M.
*Dickson, G., M.B., C.M.
†Dixon, C. J. W., M.B., C.M.
Doughty, D. S., M.B., C.M.
*Dow, D. R., M.A., M.B., C.M.
†Dunlop, J. C., M.B., C.M.
‡Ehrke, F. L., M.B., C.M.
Fairweather, D., M.A., M.B., C.M.
Forsyth, E., M.B., C.M.
*George, F. J., M.B., C.M.
*Giles, A. B., M.B., C.M.
*Gladstone, H. B., M.B., C.M.
Gordon, H. L., M.B., C.M.
*Grant, J. T., M.B., C.M.
Green, V., M.B., C.M.
*Grosvenor, W. C., M.A., M.B., C.M.
Hill, J. S., M.B., C.M.
†Home, G., M.B., C.M.
Home, W. E., B.Sc., M.B., C.M.
†Horne, R. M., M.B., C.M.
Hughes, T. E., M.B., C.M.
Jameson, G. B., M.B., C.M.
†Jareja, Sir Bhagvat Sinhji, M.B., C.M.
†Johnston, G. F., M.B., C.M.
*Jones, W. W., M.B., C.M.
Knaggs, W. H. E., M.B., C.M.
‡Koch, W. V. M., M.B., C.M.
Lambert, J. R. P., M.B., C.M.
Lishman, F., M.B., C.M.
*Lyle, F. W., M.B., C.M.
†Macalister, C. J., M.B., C.M.
*Macdonald, J. M.A., M.B., C.M.
†Mackay, F. W., M.B., C.M.
*MacLelland, R., M.B., C.M.
Macleod, H. W. G., M.B., C.M.
*Macnaughton, G. W. F., M.B., C.M.
Martin, E. F., M.B., C.M.
*Moorhouse, J. H., M.A., M.B., C.M.
Morris, S. G., M.B., C.M.
*Morrison, G. E., M.B., C.M.
*Murray, W., M.B., C.M.
†Newman, G., M.B., C.M.
Ogilvy-Ramsay, M., M.A., M.B., C.M.
*Pollock, J. D., M.B., C.M.
Poole, S., M.B., C.M.
Porter, G., M.B., C.M.
‡Ritchie, J., M.A., B.Sc., M.B., C.M.
*Robertson, J. F., M.A., M.B., C.M.
†Robertson, W. F., M.B., C.M.
Ronaldson, R. M., M.B., C.M.
Ross, J., M.B., C.M.
†Shennan, T., M.B., C.M.
†Simpson, J. C., M.B., C.M.
Sinclair, G. T., M.B., C.M.
*Sproule, W., M.B., C.M.
Stalkartt, W. H. S., M.B., C.M.
‡Walker, A., M.A., B.Sc., M.B., C.M.
Watson, J. S., M.B., C.M.
Wilson, T. A. M., M.B., C.M.

* Commended for their Theses.
† Deemed worthy of competing for the Theses Gold Medals.
‡ Those who have obtained Gold Medals for their Theses

THE DEGREES OF BACHELOR OF MEDICINE AND MASTER IN SURGERY.

Aarons, S. J.
Allison, J.
Anderson, C. W.
Anderson, G.
Balfour, H. H.
Bardswell, N. D.
Begg, W., B.A.
Bell, J. A. T.
Benson, H. M.
Birrell, E. T. F.
Blackburn, J. E.
Blackmore, G. J.
§Bowes, J. E.
Bowman, L.
Brierley, E. E.
Caine, N.
Cardale, H. J.
Carr, S. H.
Chipman, W. W.
Coulthard, W. J. C.
Crawford, J.
Cross, R.
Cunningham, R. W.
Dalziel, J. M.
Dawson, J. M.
Dee, M. V.
Dewar, T.
Esamon, A. W.
Eason, W. F.
Ewald, H. J.
Eyres, H. M.
Fenn, A. G.
Fitchett, F. W.
Fleming, A. M.
§Forbes, J., M.A.
Forbes, J., M.A., B.Sc.
Forrest, J. A.
Fraser, J. S.
§Garbutt, W. J.
Gardiner, F.
Gibb, W. A.
Gibson, T.
Gilchrist, J.
Gilfillan, S. J., M.A.
Gillies, J.
Gilruth, J. D., M.A.
Glegg, W.
Gorringe, C. J.
Graham, D. J.
Gray, J.
Greig, E. D. W.
Grieve, J. M., M.A.
Griffiths, J. H. K.
Halkon, H.
Hay, J. B.
§Haygarth, R.
Hector, C. M.
Heddle, R. P.

Henderson, G., M.A.
Henderson, G. P.
Henderson, J. H.
Howden, I. D. C.
Hughes, M.
Hunter, W. H.
Huntly, H. E.
‖Husband, A. L.
Hutton, D. M., B.Sc.
Jenkins, G. J.
Jones, D. J.
Kelly, J. I.
Ker, L., M.A.
Kirk, J.
Landsborough, D.
Landsborough, J.
Laurie, L. V.
Lawson, D.
Leebody, H. A.
Leith, R. M.
‖Lewis, T. G.
‖Lillie, W.
Lundie, G. F., M.A.
Lupton, A. C.
Lusk, S. F.
Lüttig, P. Ch., B.A.
M'Camon, R.
MacCarthy-Morrogh, A.
Macdonald, A., M.A.
Macdonald, F. B.
M'Donald, J.
Macdonald, W. M.
M'Dowell, W. C. W., B.A.
Macfie, T. H.
Mackay, D. M.
MacLaurin, C.
MacLean, K.
Macmillan, J. G.
Macmillan, N. H.
Malcolm, W. S.
Mander, W. B.
Martin, W. L., M.A., B.Sc.
Momplé, F. J. B.
Moorhead, R. L.
Norwell, J. S., B.Sc.
Ormerod, T. T.
Owen, E. L.
Owen, R.
Parsons, J. A.
Peach, C. W.
Pearson, H. C.
Petit, A. D.
Plante, G. R.
Potts, W. A., B.A.
Price, W. H.
Procter, G. L.
Rait, J. C.
Rankine, D., M.A.
Rau, M. S., M.A., B.Sc.
Raymond, J. K.
Reid, E. S.
Richardson, H.
Richardson, W. P.
Risely, R. J.
Roberts, G. L.
Robson, R. G., M.A.
Roddis, T. B. E.
Ross, V. A.
Roycroft, R.
Sadler, T. D.
Samut, R.
Scott, E. W. K.
Selby, R. G.
Simson, H. J. F.
Skeete, E. M.
Snijman, E. R.
Somerville, J. E. W.
Stanwell, F. S.
Steele, W. H.
Steven, A.
Stewart, G. E.
Stokes, W.
Stuart, J. C.
Stuart, T.
Sutton, D. C.
Taylor, W. M.
Thompson, F. S. C.
Thwaits, J. A.
Tough, J. B. K.
Veitch, J. O.
Wallace, G., M.A.
‖Waterston, D., M.A.
‖Watson, J. R., M.A., B.Sc.
Watt, J.
§Wilson, A. R., M.A.
§Wishart, W. de W.
Wood, J.
Wood, J. B.

THE DEGREE OF MASTER IN SURGERY.

Martin, E. F., M.D.

§ With first-class honours.
‖ With second-class honours.

Thesis Gold Medallists.—F. L. Ehrke, M.D.; W. V. M. Koch, M.D.; J. Ritchie, M.D.; A. Walker, M.D.

The following awards have been made:—The Ettles Scholarship, J. E. Bowes; the Beaney Prize in Anatomy and Surgery, W. J. Garbutt; the Murchison Memorial Scholarship in Clinical Medicine, N. Macvicar; the Goodsir Memorial Prize, G. Mann; the Gunning Victoria Jubilee Prize in Obstetrics, A. Walker; the Gunning Victoria Jubilee Prize in Public Health, G. Newman; the Gunning Victoria Jubilee Prize in Zoology, J. D. F. Gilchrist; the Buchanan Scholarship in Gynæcology, W. W. Chipman; the James Scott Scholarship in Midwifery, D. J. Graham; the Milner Fothergill Medal in Therapeutics, E. M. Smith, M.D.; the Cameron Prize in Therapeutics, Professor Behring; and the Edinburgh University London Club Prize, R. Hutchison.

UNSOUND FRUIT.—An enormous number of unsound greengages have been seized at a jam factory in the East-end of London and condemned.

BEQUESTS AND DONATIONS TO HOSPITALS.—Mrs. Sarah Meadows, of Aylestone Hill, Hereford, has sent a donation of £500 to the general fund of the Hereford Infirmary, and £500 to be invested as a fund for incurables, such fund to take her name.—The late Mr. John Bell Sedgwick, of St. Andrews-place, Regent's-park, London, has bequeathed £200 to the Middlesex Hospital.—Her Majesty the Queen has sent a donation of £100 to the building fund of the Royal Free Hospital, Gray's Inn-road, London.—The Treasurer of the French Hospital and Dispensary, Shaftesbury-avenue, London, has received £1000 from M. Robert Lebaudy.—The Mercers' Livery Company has sent a further donation of 100 guineas towards the rebuilding of the front of the Royal Free Hospital, Gray's Inn-road, London.—The late Mr. Woodfindin, of Kenwood Bank, Sharrow, Sheffield, has bequeathed £400 to the Sheffield Public Hospital, £200 to the Children's Hospital, and *inter alia* two-thirds of the residue of his real and personal estate are to be used in the erection, equipment, and endowment of a convalescent home, to be called the "George Woodfindin Convalescent Home."—The governors of the Haywood Hospital, Burslem, have received a donation of £100 from Mr. S. Round, of Cheddleton.—The late Mr. William Berry of Manchester has bequeathed £10,000 to the Manchester Infirmary, £2000 to the Southport Convalescent Hospital, and £1000 to the Royal Eye Hospital, Manchester.—The Merchant Taylors' Company has contributed 20 guineas to the new building fund of the Royal Ear Hospital, Soho-square, London.—Sir John Williams, Bart., M.D., has contributed £250 to the rebuilding fund of the North London or University College Hospital, Gower-street.—Mr. Henry Yates Thompson has sent on behalf of his mother, Mrs. Thompson of Thingwall, £200 towards the endowment fund of the Crewe Memorial Cottage Hospital, and the Earl of Crewe has contributed £100 towards the same fund.

PRESENTATIONS.—Dr. A. Smith of Whickham, Newcastle-on-Tyne, has been presented by the members of the Whickham Ambulance Association with a carved oak settee, bearing a suitable inscription, in recognition of his services as their lecturer.—On the occasion of their golden wedding Mr. W. U. Buée of Slough and Mrs. Buée have received from their friends and neighbours a most gratifying token of esteem and regard. A committee of residents in Slough and its neighbourhood was recently formed to consider the terms of the presentation, and at its final meeting, presided over by the Rector of Slough, reported that the scheme had been very favourably regarded by the public. As a substantial result of the support which they had received the committee purchased the lease of the house in which Mr. Buée had so long resided for the remainder of the lives of himself and his wife, and money was also invested in Consols in their names. In order to spare Mr. and Mrs. Buée the fatigue incidental to a meeting at the Town Hall, it was resolved that the presentation should be made by a deputation of three persons only, and this part of the proceedings was accordingly carried out at Mr. Buée's house on Aug. 10th. The address, which bore upwards of 270 signatures, was illuminated on vellum and framed. After it had been read and the other documents handed over, Mr. Buée responded on behalf of himself, his wife, and their daughters, acknowledging the gratification which they felt at the manifestation of so much kindness on the part of their friends.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Bonhoff, Assistant in the Hygienic Institute, has been recognised as *privat-docent* in Hygiene.—*Breslau:* The Extraordinary Professorship of Ear and Throat Diseases, has been offered to Dr. Siebenmann of Basle, who has declined it on the ground that there is no clinic to supply the necessary teaching material, and that he would, therefore, have had to take some means of collecting patients himself.—*Erlangen:* Dr. Zelenka, Professor of Zoology, has resigned his chair for the purpose of undertaking a long scientific expedition in remote regions.—*Giessen:* Professor Strahl of Marburg has been appointed as successor to Professor Bonnet in the chair of Anatomy, he having gone to Greifswald in place of Professor Sommer, whose health has unfortunately obliged him to retire.—*Halle:* Dr. D. Ackermann, Professor of Pathological Anatomy, is about to retire, his chair being taken by Dr. Eberth, Professor of Normal Anatomy, and formerly Professor of Pathological Anatomy in Zurich. To the chair of Normal Anatomy Professor Roux of Innsbrück has been appointed.—*Königsberg:* Dr. Franz Meschede has been promoted to an Extraordinary Professorship of Psychiatrics. Dr. Gerber has been recognised as *privat-docent* in Throat and Ear Diseases.—*Tübingen:* Dr. Kallius of Göttingen has been appointed Extraordinary Professor of Anatomy in place of Dr. Froriep, who has been promoted to the ordinary professorship, in succession to Professor Henke, retired.—*Prague:* Professor Rollet of Gratz is expected to be the new Professor of Physiology.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Case of Dr. Herz.

A MEMORIAL for presentation to the Prime Minister with reference to the case of Dr. Herz has been prepared by Sir Edward Reed, and is receiving the signatures of Members of Parliament. The memorial says that no treaty can justly or reasonably be held to bind the Government of this country to a course of conduct which was never contemplated by the Extradition Treaty, and which must be repugnant to the feelings of both the French and English nations, because it cannot be further prolonged without the infliction of certain death. Even if every offence alleged against Dr. Herz had been proved,

instead of being alleged only, it would nevertheless by this time, after so prolonged a period of imprisonment, have become a public duty, says the memorial, to solicit the intervention of Her Majesty's Government for the termination of the custody in which Dr. Herz has so long been held.

The Drains of the House of Commons.

Representations have been made to the First Commissioner of Works with reference to the state of the drains of the House of Commons during the hot weather, and Mr. Akers Douglas is having special inquiries made with a view to any defects being remedied.

HOUSE OF LORDS.

THURSDAY, AUG. 15TH.

Teaching University for London.

Earl Cowper, Chairman of the Royal Commission on this subject, addressed the House with regard to it in the course of the debate on the address. Everybody, he said, was agreed that it was a positive disgrace that the great population of London was not possessed of that which almost every capital in Europe possessed—a great teaching university, because they could not call by that name the University of London, which was merely an examining board, well as it did its work and eminent as were the people connected with it, and which, in spite of its name, had no more to do with London than it had to do with the rest of the United Kingdom. What was wanted was that for which for years thinking people have been striving—namely, that there should be a proper and economical system of teaching which would apply to poor as well as to rich, and which would conduct the student from point to point up to that final examination which could only be considered as the crowning of the whole, and by which the stamp of a completed education would be conferred. The plan proposed by the Commission of which he had the honour to be chairman had received the support of all the bodies interested in the question, and he urged the Government to act on the report of that Commission without any further delay.—The Duke of Devonshire, Lord President of the Council, said in reply that in the present circumstances of the situation the Government intend to proceed now with no legislative measures except such as were absolutely necessary for carrying on the business of the country. Like their predecessors, the present Government were strongly convinced of the desirability and even of the necessity of meeting the views which had been expressed in favour of the establishment of a Teaching University for London. His noble friend had mentioned the unanimity with which the present scheme had been received by many important bodies in the country, but he had passed over somewhat lightly the strong objection taken to the scheme by a large and not unimportant section of Convocation. It had not been possible for any of his colleagues to look into this matter very closely, and he was afraid that, as it was impossible to legislate at present, it would be premature on his part to commit the Government wholly to the scheme in the shape proposed by the Commission of his noble friend. He could only assure him that the subject would receive careful attention on the part of the Government before Parliament met again for legislative business.

HOUSE OF COMMONS.

FRIDAY, AUG. 16TH.

Cattle Disease.

A number of questions were addressed to Mr. Walter Long, the new President of the Board of Agriculture, with reference to the exclusion of Canadian live cattle from this country. Mr. Long, in his reply, said he was aware that in certain districts it was desired to admit the cattle, but the question was one which he was bound to consider from the point of view of the interest of agriculturists generally, which, in his opinion, imperatively required that every possible safeguard should be taken against the introduction of disease. So recently as the 10th ult. two animals landed in this country from Canada were found to be affected with pleuro-pneumonia, and in view of this fact and of all the circumstances disclosed in the printed papers which had been laid before the House he had no alternative but to maintain in force the requirement that Canadian cattle should be slaughtered at the port of landing.

East London and its Water-supply.

Mr. Chaplin, President of the Local Government Board, answering questions on this subject, said it had been a matter of much regret to him that so large a proportion of the inhabitants, and many of them the poorest, of the district included in the limits of supply of the East London Water Company had been put to very serious inconvenience by the limitation of the hours during which a supply was obtainable, and, as he could not but feel that a continuance of this limitation of the supply might be attended with danger to the public health, the condition of things had caused him some anxiety, and the matter had been receiving his constant attention. The difficulty in which the company had been placed had been occasioned by the exceptional drought which existed until very recently and the insufficiency of the means of storage possessed by the company. The company had in a large number of streets set up standpipes attached to the mains, which were constantly charged with water, and this had, no doubt, been very helpful to a large number of persons when the ordinary supply was cut off. Allegations had been made as to a very serious increase in the mortality in the district of the water company, but he had caused inquiries to be made on this subject in connexion with the returns of the Registrar-General, and he was glad to be able to state that, so far as means of comparison exist, it would appear that the mortality of the district supplied by the company had not been greater than in districts within the limits of supply of other companies where there had been no deficiency in the water-supply. As regards the statutory obligation of the company to give a constant supply, he must point out that by Section 15 of the Metropolis Water Act, 1871, it was provided that a company should not be subject to any liability for not giving a constant supply when the want of such supply arose from unusual drought or other unavoidable cause or accident. He was glad to be able to state that he was informed by the company that they found that through the recent rains they might now safely extend the hours of supply from to-morrow, and that water would be turned on at about six in the morning and left on until about five in the afternoon daily.

Provision for the Aged Poor.

Mr. Balfour, First Lord of the Treasury, said, in answer to a question by Mr. Channing, that the Government were in favour of a further investigation into the various schemes for making provision for the aged poor, and the principles on which it should be conducted were now under their consideration.

TUESDAY, AUG. 20TH.

The University of Wales.

The Chancellor of the Exchequer, replying to a question by Mr. Brynmor Jones, said that a grant of £3000 was made for the preliminary expenses of the University of Wales last year, and he understood that as this sum was insufficient for the purpose, and his predecessor promised a further grant of the same amount in the present year, a vote for that sum would be taken in a supplementary estimate.

The Marking of Foreign Goods.

Mr. Ritchie, President of the Board of Trade, undertook to consider the question of strengthening the Merchandise Marks Act and the regulations made under it, and invited members to supply him with information of cases where the law appeared to be evaded.

Health of the Mediterranean Squadron.

In response to a request for the latest information as to the health of the Mediterranean Squadron, Mr. Goschen, First Lord of the Admiralty, said that on Aug. 13th the Commander-in-Chief telegraphed that it was perfectly satisfactory.

BOOKS ETC. RECEIVED.

ALCAN, FÉLIX, Boulevard Saint-Germain, Paris.

Le Phtisique et son Traitement Hygiénique. Par Dr. E. P. Leon-Petit. 1895. pp. 303.

BAILLIÈRE, TINDALL AND COX, King William-street, Strand, London.

The Animal Tuberculoses and their relation to Human Tuberculosis. By E. Nocard. Translated by H. Scurfield, M.D. Edin., D.Ph. Camb. 1895. pp. 143. Price 4*s*.

CLOWES, WILLIAM AND SONS, Charing-cross, London, S.W.

The Volunteer Surgeon's Guide. By Surgeon-Captain R. R. Sleman. 1893. pp. 95. Price 3*s*. 6*d*.

FANNIN AND CO., Grafton-street, Dublin.

Ireland: its Health Resorts and Watering-places. By D. Edgar Flinn, F.R.C.S., D.P.H. Second Edition. Illustrated and Maps. 1895. pp. 177. Price 2*s*. 6*d*. net.

RICHARDS, W. A. AND SONS, Government Printers, Cape Town.

Cape of Good Hope Department of Agriculture: Report of the Director of the Colonial Bacteriological Institute for the Year 1894. 1895.

THE CALCUTTA CENTRAL PRESS COMPANY, Calcutta.

Handbook to the Jeypore Museum. By Thomas H. Hendley. Illustrated. 1895.

Three Cases of Friedreich's Disease (Hereditary Ataxy) associated with Genetous Idiocy: by M. J. Nolan, L.R.C.P., L.R.C.S. Irel.; reprint (John Falconer, Dublin, 1895).—Baby Buds: by Ellis Ethelmer (Mrs. M. Elmy, Buxton House, Congleton, 1895), price 1*s*.—How to Enjoy a Holiday (the Unicorn Press, Gray's-inn-road, London, 1895), price 1*s*. net.—Some Practical Points in Connexion with Rupture of the Female Perineum: by M. D. Spanton, F.R.C.S. Eng.; reprint (*Provincial Medical Journal*, Friar-lane, Leicester, 1895).—A Baneful Popular Delusion on the Subject of Motherhood: by Wm. Woods Smyth (Simpkin, Marshall, & Co., London, 1895), price 6*d*. net).—Serpents' Venom: by Thomas R. Fraser, M.D., F.R.S., F.R.C.P. Eng.; reprint (Neill & Co., Edinburgh, 1895).—Hastings and St. Leonards Carnival, 1895, Official Handbook and Guide (F. J. Parsons, Hastings).—London Temperance Hospital; Report upon the Surgical and Ophthalmic Cases admitted during the year 1894: by L. Wilde, M.D., M.R.C.P., D.P.H. (J. Vincent & Son, Little Britain, London).—The Natural History of Plants, Part 15 (Blackie & Son, London), price 2*s*. 6*d*. net.—Mittheilungen aus Kliniken und medicinischen Instituten der Schweiz; Annales Suisses des Sciences Médicales; Ueber Paget's Krankheit, von Dr. Rolf Lindt, Hefte 10, 11, 12 (Carl Sallmann, Basel und Leipzig), 1895.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ADAM, J. L., M.B., C.M. Aberd., has been reappointed Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital

ADAMSON, J., M.D. Glasg., L.R.C.S., L.M. Edin., has been appointed Medical Officer of Health for the Hetton Urban Sanitary District.

BURBIDGE, J. W., L.R.C.P., L.R.C.S., L.M. Edin., has been reappointed Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

CLENDINNEN, W. M., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer of No. 3 Sedgley District, Dudley Union, vice J. G. Clendinnen, deceased.

CROSSKEY, W. F., M.D., C.M. Glasg., has been reappointed Honorary Consulting Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

EMSON, A., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer to the Union Workhouse and the Dorchester Sanitary District.

FAWSSETT, F., M.B. Lond., B.S., L.R.C.P., M.R.C.S., has been re-appointed Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

HALL, F. A., L.R.C.P. Lond., M.R.C.S., has been reappointed Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

HILL, GEORGE, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Holme Cultram Urban Sanitary District.

HOUGHTON, L. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Second Sanitary District of the Liskeard Union.

JAGO, E. O., M.R.C.S., has been appointed Medical Officer of Health for the Irlam Urban Sanitary District.

KINGDON, E. C., M.B., M.R.C.S., has been appointed Honorary Surgeon to the Nottingham Eye Infirmary.

LAIRD, F., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Ravensthorpe Sanitary District of the Dewsbury Union.

LAMB, WM., M.D., C.M. Edin., has been appointed Medical Officer of Health by the Arnold District Council.

LASLETT, MAURICE H., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Junior Assistant Medical Officer to the Somerset and Bath Lunatic Asylum.

MACKEITH, A. A., M.B., C.M. Glasg., has been appointed Medical Officer for the Seventh Sanitary District of the Barnstaple Union.

MASON, A. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Walton Sanitary District of the Chertsey Union.

NAIRN, R. W., M.B., C.M. Glasg., has been appointed Medical Officer for the Farnsfield Sanitary District of the Southwell Union.

NASH, W. G., L.R.C.P., F.R.C.S., M.B., has been appointed Medical Officer for the No. 7 Sanitary District of the Market Harborough Union.

NASON, W. S., M.B., C.M. Edin., has been appointed Medical Officer for the Workhouse of the Nuneaton Union.

O'SULLIVAN, M., M.B., B.Ch. Irel., has been appointed Medical Officer to the Medical Aid Society for the C, D, and G Divisions of the Dublin Metropolitan Police.

PEARCE, J. P., M.R.C.S., has been reappointed Honorary Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

PERKINS, HENRY CAMPBELL, M.R.C.S., L.R.C.P., has been appointed Medical Officer to the Nayar Brigade, Travancore, Madras.

POOLE, S., M.B., C.M. Edin., has been appointed a District Medical Officer for the Wolverhampton Union.

ROOSE, R., M.D. Brux., L.R.C.P., L.M., L.R.C.S. Edin., M.R.C.S., has been appointed Medical Attendant to the Turkish Embassy in London.

SMITH, R. W. INNES, M.B. Edin., has been appointed Assistant House Surgeon at Ancoats Infirmary, Manchester.

SMYTHE, L., M.D. Glasg., F.R.C.S. Eng., has been reappointed Honorary Consulting Surgeon to the Lewes Dispensary and Infirmary and Victoria Hospital.

TAYLOR, J., M.D., C.M. Aberd., D.P.H. Camb., has been appointed Medical Officer of Health for the Chester-le-street Rural Sanitary District.

TEMPLEMAN, CHAS., M.D., C.M. Edin., D.Sc. (Public Health), has been appointed Medical Officer to the Town Council and Burgh of Dundee.

THOMAS, J. P., L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Medical Officer of Health and Medical Attendant at the Sanatorium by the Lowestoft Town Council.

TURNER, G. J. K., M.B., C.M. Aberd., has been appointed Medical Officer for the No. 4 Sanitary District of the Chipping Norton Union.

WALKER, F. H. R. J. U., L.S.A., has been appointed Medical Officer for the Coleford Sanitary District of the Frome Union.

WILLETT, EDGAR, M.B. Oxon., F.R.C.S., has been appointed an Additional Non-resident Anæsthetist to St. Bartholomew's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's-inn-road.—Clinical Assistants.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Board and residence, and allowance for washing provided.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer for one year. Salary £80 per annum, with board and lodging.

GENERAL HOSPITAL, Nottingham.—House Physician for two years. Salary £100, rising £10 a year to £120. Also Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham-hill-road.—House Surgeon. Salary £80 per annum, with apartments and board. Applications to Mr. H. Teague, Secretary, 38, Barton-arcade, Manchester.

NORFOLK AND NORWICH HOSPITAL.—Assistant to House Surgeon for six months. Board, lodging, and washing provided.

THE CHILDREN'S HOSPITAL, Temple-street, Dublin.—Resident Surgeon. Salary 50 guineas, with rooms, fire, light, and attendance.

THE COUNCIL FOR THE BOSTON RURAL DISTRICT.—Medical Officer of Health for the District for five years. Salary £110 inclusive. Applications to the Clerk of the Council, 10, New-street, Boston.

WEST HAM HOSPITAL, Stratford, E.—Senior House Surgeon for one year. Salary £75 per annum, with board, lodging, and washing.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary £100 per annum, rising £10 a year up to £150, with board, &c.

Births, Marriages, and Deaths.

BIRTHS.

BENSON.—On Aug. 14th, at Grosmont, Pantsilas, R.S.O., the wife of H. P. D'Arcy Benson, M.B., Ch.M., of a son.

BURD.—On Aug. 19th, at Castle House, Shrewsbury, the wife of E. Lycett Burd, M.D. Cantab., of a son.

CORNELIUS.—On Aug. 11th, at Compton-road, N., the wife of Walter Cornelius, M.B. Lond., of twin daughters.

EUSTACE.—On Aug. 11th, at Weston-super-Mare, the wife of E. Eustace, M.D. Durh., of a son.

KNOX.—On Aug. 13th, at East Molesey, the wife of J. J. Knox, M.A., M.B. Cantab., of a daughter.

LIGHTFOOT.—On Aug. 21st, at St. Matthew's-terrace, Leyburn, R.S.O., Yorks, the wife of J. P. Lightfoot, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

ORMEROD.—On Aug. 17th, at 26, Devonshire-terrace, Hyde-park, W., the wife of Charles E. Ormerod, M.D., of a son.

POWELL.—On Aug. 14th, at Pirbright, Surrey, the wife of Surgeon-Captain S. Powell, M.B. Irel., Army Medical Staff, of a daughter.

SEQUEIRA.—On Aug. 16th, at Branksome, Bolingbroke-grove, Wandsworth-common, the wife of G. W. Sequeira, M.R.C.S. Eng., of Aldgate and Streatham, of a daughter.

WHITESTONE.—On Aug. 13th, at Hollingbourne, Kent, the wife of Augustus M. Whitestone, M.B. Dubl., of a son.

MARRIAGES.

EVANS—DIXON.—On Aug. 21st, at All Saints, Wribbenhall, Kidderminster, by the Rev. F. R. Evans, assisted by the Rev. H. Brierley and the Rev. A. Dickins, Oliver Conrad Penrhys Evans, M.D., of Kidderminster, youngest son of the late Colonel H. W. Evans, to Ethel Martha (Patty), daughter of Henry Dixon, Esq., J.P., of Wribbenhall. No cards.

FOTHERGILL—WOON.—On Aug. 15th, at St. Luke's, Chelsea, W. E. Fothergill, M.A., B.Sc., M.B., C.M. Edin., of Manchester, to Edith Alberta, third daughter of J. Dillon Woon, Esq.

HOLDEN—SIKES.—On Aug. 13th, at St. Peter's Church, Sudbury, John Sinclair Holden, M.D. Irel., of Sudbury, to Mary Agnes, eldest daughter of the late John Sikes, Esq., of Sudbury, Suffolk.

STANLEY—HACON.—On Aug. 14th, at the Parish Church of St. John-at-Hackney, Hubert Stanley, B.A., M.B. Camb., M.R.C.S., L.R.C.P., of Brabourne, Kent, to Emily Laura, youngest daughter of Edward Dennis Hacon, F.R.C.S., of Hackney.

YOUNG—WHITE RICKARD.—On Aug. 15th, at S. Columb Minor, Alfred H. Young, M.B., F.R.C.S., of the Owens College, Manchester, to Caroline Davy, daughter of the late R. White Rickard, of The Bays, Putney, and New Quay, Cornwall. No cards.

DEATHS.

BRISTOWE.—On Aug. 20th, at Dixton Vicarage, Monmouth, John Syer Bristowe, M.D., LL.D., F.R.S., F.R.C.P., Consulting Physician to St. Thomas's Hospital, of Old Burlington-street, aged 68.

CORNWALL.—On Aug. 12th, at Glastonbury, John Cornwall, M.R.C.S., in his 79th year.

THOMPSON.—On Aug. 8th, at Exeter, George Thompson, M.D., for nearly twenty years Medical Superintendent of the City and County Asylum, Stapleton, Bristol, aged 52.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

"THE LANCET" AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

THE LATE SIR WILLIAM SAVORY, BART., F.R.S., &c.

MESSRS. BAILLIÈRE, TINDALL, AND COX have sent us a copy of a photogravure by the Swan Electric Engraving Co., from a photograph by Messrs. Barraud, which they have published of the late Sir William Savory. It is extremely well executed and an admirable portrait. The published price is half a guinea.

J. G., M.B., C.M.—Polyorchidism has frequently been diagnosed during life, but only one case (two testicles on one side) has been found on post-mortem examination, and in this case there was no microscopic verification of the nature of the supposed additional testicle. Orth's Handbook of Pathological Anatomy contains an account of this case.

Civis Colonix.—In answer to a question addressed to our readers last week two correspondents have recommended that communication should be opened with "Cheiron," 460, Oxford-street, W.

PENSIONS TO POOR-LAW MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—Kindly inform me through your correspondence columns under what Act of Parliament a board of guardians may grant a retiring pension to a district medical officer, what proportion it may bear to the former salary, and whether a practitioner of fifty-five years of age and a continuous service of twenty-nine years would be eligible for it.

I am, Sirs, yours faithfully,

Aug. 7th, 1895. AN OLD SERVANT.

*** The Act of Parliament relating to superannuation is Vict. 23, c. 31. The candidate for full superannuation—namely, two-thirds of his salary—must be sixty years of age and have spent forty years in the Poor-law service. Retirement after ten years' service entitles the Poor-law medical officer to ten-sixtieths of his salary, with an addition of one-sixtieth in respect to each additional year of service until a maximum of forty-sixtieths (or two thirds) be reached.—ED. L.

MEDICAL TITLES.

To the Editors of THE LANCET.

SIRS,—I am a mere licentiate of a College of Physicians and of a College of Surgeons. My doorplate bears the modest inscription Mr. ——, Surgeon. By a recent legal decision it is doubtful whether a licentiate of a College of Physicians has the right to call himself a physician. If this be true it is obvious that the same ruling must hold good in the case of a licentiate of a College of Surgeons. Must I erase the word "surgeon" from my plate, and if so what am I to substitute?

I am, Sirs, yours faithfully,

Aug. 18th, 1895. A MERE LICENTIATE.

THE UTILISATION OF THE LABOUR OF INMATES OF WORKHOUSES.

A CORRESPONDENT makes the following suggestion to us:—

"The utilisation of pauper labour without injury to the labour market appears to be a difficult problem. But there are some channels into which it could be turned with advantage to the working community. For example, a free day-nursery for the children of women who have to work would be a great boon to those poor mothers. There are thousands of widows, deserted wives, and other women who are compelled to support themselves by working out of their homes. They are often greatly handicapped by having very young children, for whose care some provision is, with difficulty, made out of the small wages they earn so hardly. The poor-houses might not be the fittest possible place, but they are better than the streets. No doubt a free nursery would be a gain not only to the mothers of the children but to the ratepayers. It would diminish sickness and accidents among the children, and it would enable women, who now have to take their children into the house, to live outside on their own earnings. But, even if it cost a little, money could not be better spent than in helping those who are willing to do their utmost to keep off the rates."

As is the case with so many kindly and philanthropic proposals there is as much to be said against this one as for it. The proper management of day-nurseries and *crèches* is an exceedingly difficult thing, and it is not very likely that many of the unfortunate derelict women our correspondent refers to would be able to bring to their task any of the qualities necessary for its proper performance, and the risk of the spread of disease would be increased. Again, a free day-nursery would have the objection of all entirely free things. The really hardworking and self-respecting would be inclined to look down upon an institution as open to their idle and dissolute sisters as to themselves, while the thoroughly worthless would make of the charity almost a permanent home for their children. The States of New York and Massachusetts have done more systematic work in this direction, we believe, than any of the countries in Europe and, if our correspondent is interested in the question he cannot do better than write to the New York Board of Charities or the Boston Children's Aid Society for information.

M.B., C.M.—Our correspondent asks our advice so that he may "know how to act should such things occur again." We hope they never may, for they disclose a lamentable state of affairs, but should they, it will be, in our opinion, his best, though his most disagreeable course to disregard his fellow-practitioner entirely—to treat him as one who has placed himself in a situation where the calls of etiquette cannot be worth listening to. His duty will be towards the patient, not his patient strictly, but a sufferer.

A QUESTION OF SALARY FOR MEDICAL OFFICERS OF HEALTH.

To the Editors of THE LANCET.

SIRS,—I am medical officer of health to a rural district council, and I have been requested to formulate a scale of fees for attendance and medicine at the isolation hospital, which is a mile and a half from my residence. The appointment most probably would be permanent, and the administration would devolve on me. The number of patients would vary, and at times there would not be any. What are the usual fees charged; or what could be considered reasonable fees?

I am, Sirs, yours faithfully,

Aug. 19th, 1895. INQUIRER.

*** No general rule can be laid down; but a fixed salary should be given for the general medical control and supervision of the establishment, and the amount of this must necessarily depend upon the distance of the hospital from the writer's residence, the nature of the resident hospital staff, the number of beds, and the frequency of the use of the hospital. To this should be added a fee for attendance on each patient who is not, at his or her own cost, attended by another medical practitioner. The amount of this will, of course, depend upon the fees generally paid in the locality, and the fee should be less when multiple hospital patients are seen at one visit than when journeys have to be paid to see a single hospital patient. But the scale of fees should be fixed in advance, the medical attendant taking the chance of the several attacks being lengthy and troublesome or of short duration and trivial.—ED. L.

Inquirer's communication is receiving attention.

FROZEN SECTIONS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me where I could get any information about frozen sections (say, of brain)? Also what is the best work on brain localisation?

I am, Sirs, yours thankfully,

July 20th, 1895. COLONIAL.

*** Information as to the preparation of sections by freezing and other methods will be found in Colman's "Section Cutting and Staining," Goodall's "Microscopical Examination of the Human Brain," and similar works. "Functions of the Brain," by Dr. Ferrier, and the chapter on Localisation in Dr. Gowers' "Manual of Diseases of the Nervous System" contain very complete information upon the subject of brain localisation.—ED. L.

"PROPER FACILITIES TO THE CORONER."

To the Editors of THE LANCET.

SIRS,—I beg to thank you for your prompt reply to my question in your last issue; but from the opinion expressed in the following part of your sentence I must say that I very strongly dissent, as I think most of my medical brethren will also. The coroner (non-medical, I may state) for this district—and probably the same might be said of many others—seems to be decidedly averse to calling professional witnesses if he can by any means avoid doing so. Though inquests have been held on several cases in which, to my mind, the medical evidence was a most important item, our coroner has always decided not to summon the medical man. Now, without, of course, wishing to outstep the province of the medical practitioner, I would simply point out that it is a gross injustice to any medical man that he should be requested to politely "give a coroner previously to the inquest every proper information within his power," and thus, of course, obviate the necessity of his being summoned. I grant that a great deal of explanation may possibly rest in the interpretation of your word "proper," your definition of which term I should like to see. But I know that, for my own part, I should consider myself "very ill-advised" indeed to give gratis to any person, coroner or any other, professional information for which I am honourably and legally entitled to receive one guinea. Personally, I am not at all anxious to appear in coroners' courts more frequently than is absolutely necessary, but I do think that it is most dishonouring and degrading to our profession that its members should be thus quietly and privately induced to give away freely and gratuitously, as if it were worth nothing, that which is of legally recognised high value, is their own exclusive right as members of the profession, and should be duly prized accordingly. It seems needless for me to add that we have, of course, no claim for remuneration unless under summons, and all other information given is, apparently, never expected to be charged for.

I am, Sirs, yours faithfully,

Aug. 19th, 1895. MEDICUS.

*** Our correspondent's inference is by no means warranted. He placed before us a general case, not a special one, and the information that the coroner in a particular district is a layman and averse to calling professional witnesses has nothing to do with his previous communication. Our reply was based on what we were asked, not on what we did not know. "Proper" information means, of course, general information to be given to a fellow citizen discharging a civic duty, not particular scientific information which the medical man would do well to withhold until upon his oath before the coroner. Such courtesy as we have suggested as advisable between a coroner and a medical man, whatever the profession or proclivities of the coroner, so far from obviating the necessity of summoning the medical man, would in many doubtful cases lead directly to that course. We are perfectly alive to the high value of medical evidence at inquests, as the records of our columns from year to year amply demonstrate. We must add that our correspondent is somewhat unjust as well as illogical in thus (thoughtlessly no doubt) suggesting that we would recommend the adoption of any course of action "dishonouring and degrading to our profession."—ED. L.

Subscriber.—The most correct method is to print the name as follows:—Mr. A—— B——, M.B., C.M. This should defy criticism.

W. S. must pass at least the two final examinations required for the Paris M.D. degree.

M. V.—We cannot insert the letter. We do not recommend individual practitioners.

"UNQUALIFIED PRACTICE."

To the Editors of THE LANCET.

SIRS,—There is one aspect of the question to which I have seen no reference yet in all the discussions. I require someone to do my dispensing, and to attend to anything while I am on my rounds, also to make the "harmless, necessary" perfunctory calls which many of my old poor patients so much enjoy. Of course I refer to the visits between the essential ones. For these purposes, I have always found a young gentleman fresh from the hospital, and reading for his diploma, fully competent. In deference, however, to the growing feeling against unqualified assistants, I am willing to pay the market price for a qualified man, though his time would hang rather heavily, as I prefer to do the visiting myself. In response to my advertisement, only three qualified men applied. One was in Ireland, two far off for a personal interview, and the others were considerably over forty years of age, and therefore, from my point of view, unsuitable. I am, Sirs, yours truly,

Aug. 16th, 1895. PRINCIPAL.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Aug. 17th appears a letter signed "Justitia," complaining of the great evil which exists amongst us of unqualified practice. Beneath it you add a note expressing your opinion that the General Medical Council is always ready to act in cases of covering and unqualified practice. May I be allowed to respectfully differ from you in this particular? Some distance from me is a branch surgery far away from the principal, carried on by a resident unqualified assistant, who signs death certificates right and left and otherwise acts as only one "sine diploma" dares. Some two years ago I wrote to the General Medical Council informing it of this flagrant misconduct, and gave three cases, with names and addresses, of persons who had been attended by the unqualified man and had died, the death certificates being signed by the principal, who in neither case had seen the patient, without the slightest trouble. The only satisfaction I got was a request to procure statutory declarations—by which, I suppose affidavits were meant—presumably at my own expense, and, far worse, that of courting publicity in the matter. Naturally this course was not quite to my mind; so I let the matter rest, and have heard nothing since, and the same kind of practice flourishes to-day. This is the "readiness to act" you so confidently put forward.—I am, Sirs, yours faithfully,

Aug. 20th, 1895. NON SEQUITUR.

*** The General Medical Council possesses no machinery for collecting evidence, and does not exist for such purposes. Our correspondent will find it ready to act when a case such as he details is brought forward properly substantiated. No tribunal can do more; for the Council is a disciplinary court, not a detective body.—ED. L.

RAILWAY TRANSPORT FOR INVALIDS.

To the Editors of THE LANCET.

SIRS,—A reward was offered a short time ago in a London daily for "the best and simplest method by which an invalid can be transported by rail so as to receive absolutely no jolting." The advertiser's signature was anonymous, and the offer emanated from a foreign address. Would any of your subscribers be kind enough to state anything they know about this offer or its result? If a satisfactory and winning method was obtained by this means from some competitor in England for use abroad, some of us at home would like to know of it, as some satisfactory and simple method has been for a long time much desired. I have been unable to gather anything concerning the result of the offer by other means, so I trust that some of your subscribers may help me.

I am, Sirs, yours truly,

Aug. 18th, 1895. RAILWAY.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Aug. 22nd, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug. 16	30·22	S.W.	67	61	89	74	60	...	Overcast
,, 17	30·21	S.	65	60	116	79	60	...	Cloudy
,, 18	30·37	S.W.	72	64	119	80	59	...	Bright
,, 19	30·04	S.W.	66	60	121	84	59	...	Bright
,, 20	30·08	S.W.	67	62	111	78	62	...	Cloudy
,, 21	30·07	W.	65	62	120	82	60	...	Bright
,, 22	29·87	S.W.	71	67	85	73	61	0·03	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.., Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Toronto Mail, Birmingham Argus, North Wilts Herald, Birmingham Post, Ilfracombe Gazette, Eastern Morning News, Kilburn Post, Manchester Guardian, Dublin Evening Herald, Carlisle Express, Cambrian, Irish Times, Naval and Military Record, Newcastle Leader, Darlington Times, Putney News, Brighton Gazette, Salisbury Journal, Cheltenham Examiner, Midland Daily Telegraph, Leith Burghs, Pilot, Montrose Review, Brecknock Beacon, Le Courrier de la Presse, Tottenham and Edmonton Weekly Herald, Derby Daily Telegraph, Lincolnshire Chronicle, Torquay Directory, Cape Argus, Coventry Times, Inverness Courier, St. Bartholomew's Hospital Journal, Court Journal, Tunbridge Wells Advertiser, Falkirk Herald, Goole Times, Keighley Herald, Ayrshire Post, Staffordshire Chronicle, Morning Leader, &c., &c.*

Communications, Letters &c. have been received from—

A.—Mr. E. V. Allen, Lond.; Messrs. Allard and Co., Lond.; Aberdeen University, Secretary of; Alpha, Crook; Agricola, Lond.

B.—Dr. G. S. Buchanan, Lond.; Mr. L. Browne, Lond.; Mr. F. Bass, Lond.; Mr. G. Bromet, Lond.; Mr. W. U. Buée, Slough; Mr. J. G. Bride, Lond.; Mr. T. B. Browne, Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.

C.—Mr. H. W. Cox, Brighton; Miss Candy, Lond.; Messrs. C. J. Clay and Sons, Lond.; *Clinical Sketches*, Lond., Manager of; Central London Throat and Ear Hospital, Secretary of; Church Sanitary Association, Lond.; Children's Hospital, Dublin, Secretary of; Dr. C., Bromley; Climo, Lond.

D.—Dr. G. Drenford, Baltimore; Mr. C. W. Dean, Lancaster; Miss C. D'Orsey, Lond.; Messrs. Duncan, Flockhart, and Co., Edinburgh.

E.—Dr. D. G. Evans, Cefnybedd; *Essex County Standard*, Colchester, Publisher of; E. D. G. S., Lond

F.—Sir J. Fayrer, Lond.; First Swiss Alpine Milk Exporting Co., Lond.; F. P. A., Surbiton.

G.—Dr. A. V. Geoghegan, Paris; Dr. A. B. Griffiths, Lond.; Mr. J. Gay, Lond.; Mr. J. Graham, Sheffield; Mr. H. W. G. Green, Devonport; Glasgow University, Secretary of.

H.—Dr. F. Hamilton-Kenny, Oakleigh, Victoria; Mr. F. Hobday, Lond.; Mr. W. Horrocks, Bradford; Mr. T. J. Hanley, Lond.; Mr. J. Heywood, Manchester; Messrs. Hart and Son, Saffron Walden; Howard Association, Lond., Secretary of; Hydrogen, Lond.

I.—Institute of Anatomy, Bucharest, Director of.

J.—Dr. M. Jennings, Ennis; Mr. H. S. Jackson, H.M.S. *Galatea*, Torquay; Mr. R. Johnston, Bawtry.

K.—Dr. A. W. Kirkpatrick-Picard, Chichester.

L.—Dr. W. A. G. Laing, Truro; Dr. A. B. Lazarus, Melbourne, Victoria; Mr. A. Lewino, Lond.; Mr. J. Lupton, Ashton-under-Lyne; Messrs. Laidlaw and Sandeman, Galashiels; Liquor Carnis Co., Aston Clinton; Lace Web Spring Mattress Co., Sandiacre, Manager of; London Press Exchange, Secretary of; L.R.C.P., London.

M.—Mr. S. B. Mason, Pontypool; Mr. W. Murray, Lond.; Miss M. Macgillivray, Bendigo, Victoria; Messrs. Macmillan and Co., Lond.; Messrs. Marshall, Gibbon, and Co., Manchester; Mutual Life Assurance Co., New York, Manager of; Medicus, Glasgow; M. N., Lond.

N.—Not a Collegiate.

O.—Owens College, Manchester, Dean of.

P.—Dr. C. Paget-Blake, Torquay; Dr. C. Pollard, Worcester; Miss Pyle, Bournemouth.

R.—Rev. C. E. Roberts, Halton; Mr. R. Redpath, Newcastle-on-Tyne; Messrs. Robertson and Scott, Edinburgh.

S.—Dr. S. H. Snell, Grays; Rev. G. H. Stalte, Liverpool; Mr. J. Startin, Lond.; Mr. H. Smith, Thorpe Hesley; Mr. J. B. Sutton, Lond.; Messrs. G. and G. Stern, Lond.; Messrs. Street and Co., Lond.; Messrs. Salamon and Co., Lond.; Messrs. Street Brothers, Lond.; Messrs. F. Stearns and Co., Lond.; Sharon Chemical Co., Little Chester.

T.—Dr. W. B. Thorne, Friedburg, Germany; Rev. A. Tooth, Croydon; Mrs. Theobald, Leicester; Messrs. Thomson and Shephard, Lond.; Throat Hospital, Golden-square, Secretary of.

V.—Mrs. M. Verran, Lond.

W.—Dr. J. J. Wallace, Norfolk; Mr. E. Williamson, Manchester; Miss Wickham, Lond.; West Ham Hospital, Secretary of.

Y.—York, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. A. E. Ash, Stoke-on-Trent; Mr. R. G. Allen, Belper; Alpha, Lond.; A. B. C., Lond.; Alpha, Bedford; A. M. K., Brighton; Assistant, Lond.

B.—Dr. D. C. Black, Glasgow; Dr. H. P. D'A. Benson, Grosmont, Herefordshire; Dr. J. J. Boyd, Maritzburg, Natal; Mr. T. H. Brocklehurst, Weymouth; Mr. B. Blatchley, Lond.; Mr. C. Beesley, Barnsley; Mr. J. S. Buck, Eaton Socon; Mr. D. Bradfield, Bridgwater; Mr. H. Bristowe, Monmouth; Messrs. Blondeau et Cie., Lond.; Messrs. Battley and Watts, Lond.; B. H., Lond.; Banks, Lond.

C.—C. R. B. A., Edinburgh; Coach, Lond.

D.—Dr. W. W. Davies, Bristol; Delta, Lond.

E.—Mr. F. G. Ernst, Lond.

F.—Ferrum, Lond.; F. C., Pontnewydd; Fides, Lond.; F.R.S.E., Lond.

G.—Mr. W. F. Gardener, Sydenham; G., Lond.; G. P., Birmingham.

H.—Dr. C. N. Hewitt, St. Paul, Minn., U.S.A.; Dr. W. H. Hewlett, Wivenhoe; Dr. J. M. Hughes, Ruthin; Mr. C. Hine, Parkstone; Mr. W. A. Hardiker, Brymbo; Mr. J. E. Hancock, Woking; Messrs. C. J. Hewlett and Son, Lond.; Messrs. Hart and Son, Saffron Walden; Herpes, Lond.; H. M. N., Lond.

I.—Messrs. Idris and Co., Lond.

J.—J. W., Lond.; J. H., Lond.

K.—Mr. W. Kemsley, Lond.; Mr. W. H. Kershaw, Lond.; Mr. W. Kent, Bristol; Messrs. Keith and Co., Edinburgh.

L.—Mr. M. C. Lowe, Lond.; Mr. J. P. Lightfoot, Leyburn; Mr. C. Lamond, Inverness; Lancashire, Lond.; Locum, Chorley; L.R.C.P., London.

M.—Mr. R. Mosse, Lond.; Mr. R. W. Marston, Berne; Miss Mainwaring, Hastings; Mrs. Medlicott, St. Alban's; Male Nurses' Mutual Benefit Association, Lond., Secretary of; M. C., Lond.; Mater, Lond.; Medicus, Glasgow; Medicus, Lond.

N.—Mr. H. Nutt, Sherborne; National Provident Institution, Lond., Sec. of.

O.—Dr. C. E. Ormerod, Lond.; Dr. H. Oppenheimer, Lond.

P.—Dr. W. R. Parker, Kendal; Practice, South Shields.

R.—Messrs. E. Roe and Co., Salisbury; Registered Nurses' Society, Lond., Secretary of; R. C. L., Lond.

S.—Dr. R. M. Spooner, Blandford; Mr. E. Saxton, Nantwich; Mr. Noble Smith, Lond.; Mr. W. L. Saunder, Manchester; Mr. D. Stead, Pontrilas; Mr. E. T. Smith, Preston; Smedley's Hydro. Establishment, Matlock, Secretary of; Stanley Hospital, Liverpool, Secretary of; South Coast, Lond.; Surgeon, Lond.; Spontaneous, Lond.; Status, Lond.; S. G., Lond.; Staffs, Lond.

T.—Mr. J. Thin, Edinburgh; Mrs. R. T. Thomas, East Looe; Messrs. Thomson and Shephard, Lond.; Throat Hospital, Golden-square, Dean of; T. Y., Lond.

W.—Dr. A. W. B. Warde, Folkestone; Mr. J. Wilson, Glasgow; Mr. W. A. Williams, Harrow; W., Lond.

X.—X. Y. Z., Lond.

Y.—York, Lond.

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year	£1 12 6
Six Months	0 16 3
Three Months	0 8 2

POST FREE TO THE CONTINENT, COLONIES, UNITED STATES, INDIA, CHINA, AND ALL PLACES ABROAD.

One Year	£1 14 8
Six Months	0 17 4
Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to Mr. CHARLES WOOD, Manager, THE LANCET Office, 423, Strand, London.

ADVERTISING.

Books and Publications	Seven Lines and under	£0 5 9
Officia and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6
First Page (under Contents) when space available (Books only)	Five Lines and under	0 5 0
	Every additional Line	0 1 0
Quarter Page		1 10 0
Half a Page		2 15 0
An Entire Page		5 5 9

Terms for Position Pages and Serial Insertions on application.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to fictitious names or initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials &c. sent to the Office in reply to advertisements; copies only should be forwarded.

Terms for Serial Insertions may be obtained of the Manager, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.